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# **COSTCO WHOLESALE**

## **Final**

# **Environmental Impact Report**

89.469E

Draft EIR Publication Date: December 12, 1991

Draft EIR Public Hearing Date: January 16, 1992

Draft EIR Public Comment Period: December 12, 1991 to January 23, 1992

Final EIR Certification Date: April 16, 1992



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Department of City Planning

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Changes from the text of the Draft EIR are indicated by solid dots (●)  
at the beginning of each revised section, paragraph, graphic or table.

REF 711.4097 C8243

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● CERTIFICATION MOTION

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April 16, 1992

File No.: 89.469E

SAN FRANCISCO  
CITY PLANNING COMMISSION  
MOTION NO. 13338

ADOPTING FINDINGS RELATED TO THE CERTIFICATION OF A FINAL ENVIRONMENTAL IMPACT REPORT FOR THE COSTCO WHOLESALE PROJECT.

MOVED, That the San Francisco City Planning Commission (hereinafter "Commission") hereby CERTIFIES the Final Environmental Impact Report identified as case file No. 89.469E, Costco Wholesale (hereinafter "Project") based upon the following findings:

1) The City and County of San Francisco, acting through the Department of City Planning (hereinafter "Department") fulfilled all procedural requirements of the California Environmental Quality Act (Cal. Pub. Res. Code Section 21000 et seq., hereinafter "CEQA"), the State CEQA Guidelines (Cal. Admin. Code Title 14, Section 15000 et seq., hereinafter "CEQA Guidelines") and Chapter 31 of the San Francisco Administrative Code (hereinafter "Chapter 31").

a. The Department determined that an EIR was required and provided public notice of that determination by publication in a newspaper of general circulation on September 20, 1990.

b. On December 12, 1991 the Department published the Draft Environmental Impact Report (hereinafter "DEIR") and provided public notice in a newspaper of general circulation of the availability of the DEIR for public review and comment and of the date and time of the City Planning Commission public hearing on the DEIR; this notice was mailed to the Department's list of persons requesting such notice.

c. On December 12, 1991 copies of the DEIR were mailed or otherwise delivered to a list of persons requesting it, to those noted on the distribution list in the DEIR, to adjacent property owners, and to government agencies.

d. Notice of Completion was filed with the State Secretary of Resources via the State Clearinghouse on December 12, 1991.

e. Notices of availability of the DEIR and of the date and time of the public hearing were posted within the project site by Department staff on December 16, 1991.

CITY PLANNING COMMISSION

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- 2) The Commission held a duly advertised public hearing on said Draft Environmental Impact Report on January 16, 1992, at which opportunity for public comment was given, and public comment was received on the DEIR. The period for written comments ended January 23, 1992.
- 3) The Department prepared responses to comments on environmental issues received at the public hearing and in writing during the 43 day public review period for the DEIR, prepared revisions to the text of the DEIR and response to comments received or based on additional information that became available during the public review period, and corrected errors in the DEIR. This material was presented in a "Draft Summary of Comments and Responses," published on March 19, 1992, was distributed to the Commission and to all parties who commented on the DEIR, and was available to others upon request at Department offices.
- 4) A Final Environmental Impact Report has been prepared by the Department, consisting of the Draft Environmental Impact Report, any consultations and comments received during the review process, any additional information that became available, and the Summary of Comments and Responses all as required by law.
- 5) Project Environmental Impact Report files have been made available for review by the Commission and the public, and these files are part of the record before the Commission.
- 6) On April 16, 1992 the Commission reviewed and considered the Final Environmental Impact Report and found that the contents of said report and the procedures through which the Final Environmental Impact Report was prepared, publicized and reviewed comply with the provisions of CEQA, the CEQA Guidelines and Chapter 31.
- 7) The City Planning Commission hereby does find that the Final Environmental Impact Report concerning File No.89.469E: Costco Wholesale is adequate, accurate and objective, and that the Summary of Comments and Responses contains no significant revisions to the Draft Environmental Impact Report, and hereby does CERTIFY THE COMPLETION of said Final Environmental Impact Report in compliance with CEQA and the CEQA Guidelines.
- 8) The Commission, in certifying the completion of said Final Environmental Impact Report, hereby does find that the project described in the Environmental Impact Report, as well as the preferred project as described in Building Permit Application No. 9123732S which most closely reflects Alternate C, and Alternative B, which is also under consideration, would all have these significant effects:
  - a. Would have a project-specific significant effect on the environment by increasing the site population in an area subject to seismic hazard in a major earthquake.

CITY PLANNING COMMISSION

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b. Would have a project-specific significant effect on the environment by decreasing the Level of Service at the intersection of Eleventh and Harrison Streets from C to E during the peak month.

c. Would have a significant effect on the environment in that it would contribute to cumulative traffic increases. Such cumulative transportation impacts could cause violations to particulate standards in San Francisco with concomitant health effects.

I hereby certify that the foregoing Motion was ADOPTED by the City Planning Commission at its regular meeting of April 16, 1992.

Linda Avery  
Secretary

AYES: Boldridge, Fung, Lowenberg, Smith and Unobskey

NOES: None

ABSENT: Karasick, Levine

ADOPTED: April 16, 1992

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**● COSTCO WHOLESALE  
FINAL ENVIRONMENTAL IMPACT REPORT**

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## **I. SUMMARY**

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### **A. PROJECT DESCRIPTION**

Costco Wholesale Corporation proposes to construct a 40 foot tall mixed-use development containing retail and residential components on the project site located at 454-470 Tenth Street. The project architect is Heller & Leake of San Francisco.

The 225,500 square foot (sq. ft.) site is Lots 18, 24, 32, 63, 64 and 65 of Assessor's Block 3524. The project block is bounded by Harrison Street on the north, Tenth Street on the east, Bryant Street on the south and Eleventh Street on the west. The site is located five blocks south of Market Street, and is adjacent to the U.S. 101 Freeway. The project would replace a 46,250 sq. ft. paved surface parking lot containing approximately 130 short-term and long-term parking spaces and a 179,250 sq. ft. paved vacant lot which was used by the San Francisco Police Department as a storage lot for impounded vehicles through September 1990. As there are no existing buildings on the site, the project would not require the demolition of any structures.

The proposed project would consist of two major components: a Costco Wholesale store and a residential complex. Each would have its own associated off-street parking. The retail component of the project, located on the southern portion of the site (along Bryant Street) would contain approximately 198,450 sq. ft. of parking (about 430 spaces) at ground level. The Costco Wholesale store, consisting of approximately 118,500 sq. ft. of retail space and 4,500 sq. ft. of loading area, would be elevated approximately ten feet above ground level on a podium along with an additional 68,570 sq. ft. of parking (about 120 spaces). A partial third level over the podium would contain 79,950 sq. ft. of parking (about 170 spaces). There would be a total of approximately 346,970 sq. ft. of off-street parking (about 720 spaces) serving the retail use including customer, employee and accessory parking. The structural system of the project would be designed so that a fourth level of parking could be added at a later date (unspecified at this time), so that there could be a total of approximately 890 off-street parking spaces serving the retail use. Approximately 480 sq. ft. of open space containing benches, trees, ground cover and art work would be located along Tenth Street adjacent to the building entry.

The residential component of the project, located on the northern portion of the site (along Harrison Street) would be a 40 foot tall building containing 60 to 80 affordable dwelling units above 60 to 80 residential parking spaces at ground level. The residential portion of the project would be either sold or ground-leased by the project sponsor and could be operated by a separate owner in the future.

The site is in the SLI (Service / Light Industrial) Use District and the 40-X Height and Bulk District. The permitted floor area ratio (FAR) for commercial use in the SLI Use District is 2.5:1. The FAR of the retail component of the project would be about 0.55:1. Maximum dwelling unit density allowed would be one unit per 200 sq. ft. of lot area in the SLI district; the dwelling unit density of the residential component of the project would be approximately one unit per 325-435 sq. ft. of lot area.

- Retail-serving parking in excess of 651 spaces (434 required spaces and 217 accessory spaces) could be provided as a principal permitted use if available for use by the operators, employees, clients, and/or visitors of a permitted, or approved conditional, non-residential use in the vicinity, per Section 817.28 of the *City Planning Code*. Dwelling units would require Conditional Use authorization for affordable housing in the SLI district. The project sponsor expects environmental review, project review and detailed design to be completed by early 1992. If the project were approved and building permits issued, construction would take about 10-12 months. Total construction cost would be about \$7,500,000 (1989 dollars).

## **B. MAIN ENVIRONMENTAL EFFECTS**

### **LAND USE AND ZONING (pp. 49 to 52)**

The site is in the SLI (Service / Light Industrial) Use District and the 40-X Height and Bulk District. The proposed project would require the removal of a 46,250 sq. ft. paved surface parking lot containing approximately 130 short-term and long-term parking spaces and a 179,250 sq. ft. paved vacant lot which was used by the San Francisco Police Department as a storage lot for impounded vehicles through September 1990. The proposed project would increase the density of development on the site, adding about 118,500 sq. ft. of retail space, 4,500 sq. ft. of loading area, 480 sq. ft. of open space, and 60 to 80 dwelling units. At project completion, there would be a net increase of about 300,720 sq. ft. of parking area (590 spaces) over the 46,250 sq. ft. of the site (130 spaces) presently operated as a public parking lot.



- The project would require Conditional Use authorization for residential use in the SLI district.

#### CULTURAL RESOURCES (p. 53)

The project site was historically situated near the edge of Mission Bay, within the marshy drainage of Mission Creek, until the 1860s. Available archival documentation suggests that the proposed project area remained in a relatively undeveloped state through the Later Gold Rush Period (1853 - 1860). Archival sources indicate the subject parcel was filled and subsequently graded at some point during the late 1860s and early 1870s. It is likely that a diverse quantity of cultural refuse may have been deposited within the project site during filling and grading activities. The character of the project site remained essentially unchanged until the Earthquake and Fire of 1906. Following this event, the project site became home to a variety of structures, including numerous dwellings, storage and office spaces, and auto garage and industrial uses. All of these structures have since been demolished.

#### TRANSPORTATION (pp. 53 to 77)

Retail-related trip generation for the proposed project would be about 5,840 weekday trips and about 6,640 Saturday trips under normal circumstances and about 7,800 weekday trips and about 8,800 Saturday trips during the peak month. Residential-related trip generation would be about 210 weekday and Saturday vehicle trips.

- The project would remove approximately 130 short-term and long-term parking spaces and would provide about 720 retail-serving spaces ([if approved,] an additional 170 spaces could be provided at a later date) and 60 to 80 residential-serving parking spaces. Retail-serving parking in excess of 651 spaces (434 required spaces and 217 accessory spaces) could be provided as a principal permitted use if available for use by the operators, employees, clients, and/or visitors of a permitted, or approved conditional, non-residential use in the vicinity, per Section 817.28 of the *City Planning Code*. Estimated peak retail parking demand from the project would be for about 790 spaces during the peak month on a Saturday (peak day). The peak parking demand would not be met by the proposed 720 spaces. This unmet demand would result in a combination of spillover parking onto on-street spaces and queuing of vehicles at the entrance to the parking garage by customers waiting for an on-site parking space rather than walking the distance from an off-site parking space to the store. The spillover into on-street spaces, however, would not be an impact because

on-street parking occupancy on Saturdays is about 55% in the project area. At the later date when Costco could expand the parking garage, peak parking demand would be met by the proposed 890 retail spaces. The residential component of the project would provide one off-street parking space per dwelling unit as required by the *City Planning Code*.

The proposed project would not result in a large number of pedestrian trips as most retail trips are expected to be in automobiles. It is estimated that just over 20% of the 80 weekday p.m. peak-hour trips generated by the residential units would be walking trips.

Sidewalk detours and curb lane closures on the Harrison, Tenth, Eleventh and Bryant Street project frontages would be necessary during construction. Construction truck traffic would be limited to the period between 9:00 a.m. and 3:30 p.m. Construction traffic would slow traffic movements along Tenth, Eleventh, Harrison and Bryant Streets, including those of SamTrans and MUNI buses.

Cumulative development, including that from the proposed project, by the year 2000 would be expected to worsen existing (1990) weekday p.m. peak-hour vehicle Level of Service (LOS) A conditions at the Ninth / Bryant Streets intersection to LOS B; LOS B conditions at the Tenth / Harrison Streets intersection to LOS C; LOS C conditions at the Eleventh / Bryant / Division Streets intersection to LOS D; LOS C conditions at the Tenth / Bryant Streets intersection to LOS E; and LOS C conditions at the Eleventh / Harrison Streets intersection to LOS F. Saturday peak-hour vehicle Level of Service conditions are currently (1990) at LOS A at all intersections studied, except at the Tenth / Bryant Streets intersection, which operates at LOS B during the Saturday peak hour. Saturday peak-hour operations with cumulative development, including the project, in the year 2000 would be expected to remain the same at the study intersections, except at the Eleventh / Bryant / Division Streets and Eleventh / Harrison Streets intersections, which would worsen from LOS A to LOS A/B.

Traffic generated by the project would increase total traffic on major freeways during the p.m. peak period by less than 0.5%. Such increases would not be measurable against day-to-day fluctuations in traffic volumes.



AIR QUALITY (pp. 77 to 82)

Project-related vehicular traffic would add to cumulative regional pollutant emissions, and contribute to the continued failure of the Bay Area to attain federal ozone and CO standards. Project-related traffic alone would contribute less than one percent of transportation related emissions resulting from development in the County, and thus would not pose a potentially significant effect on air quality. However, emissions of particulates generated by the project together with cumulative development would increase particulate concentrations, which would increase the frequency of fine particulate matter standard (PM<sub>10</sub>) violations in San Francisco, with concomitant health effects.

Project emissions alone would not cause any air quality standards to be violated, and local CO concentrations are predicted to be less in 2000 than in 1985, because the effects of emission controls on new vehicles would offset increases in traffic volumes and congestion.

CONSTRUCTION NOISE (pp. 82 to 86)

Project construction would temporarily increase noise and vibration levels in the area of the site during the 10- to 12-month construction period. Highest average construction noise levels experienced in residences or light industrial facilities (depending on whether pile-driving were to occur at night or during daytime hours) near the site could interfere with rest and speech. Pile driving and the operation of construction equipment could temporarily raise the noise level to as high as 99 dBA with windows open and 89 dBA with windows closed in buildings across the street from the site. Pile driving would cause vibrations, which are more irritating to some people than noise, in adjacent and nearby buildings.

GEOLOGY AND SEISMICITY (pp. 86 to 89)

The Downtown & Vicinity, like other parts of San Francisco and the Bay Area, is subject to potentially large earthquakes from the San Andreas and Hayward faults. Employees, customers and residents of the project would be exposed to associated hazards during an earthquake. Since new buildings are subject to more stringent building and structural standards than are older buildings, persons occupying buildings such as the proposed project would be relatively safer than those in some older buildings.

## HAZARDOUS MATERIALS (pp. 89 to 94)

At present, the property is fenced, paved, and used as a parking lot. In the past, however, the site held a variety of commercial and industrial uses that dated from the 1880s. A number of such uses could have caused contamination of the site with hazardous wastes. Potential concerns include contamination from underground storage tanks, coal yards, foundry wastes, metal works wastes, storage yards, manufacturing wastes, and possible tainted fill. Contamination from the industries could have occurred through materials leaks, carelessness, accidents, or poor waste handling techniques.

The project site is situated outside of the designated area of San Francisco where a soils testing report would be required by law (i.e. under the "Maher" ordinance). Prompted by concerns over possible health threats from development of the potentially contaminated site, the Department of City Planning requested that soil samples be collected and tested for hazardous wastes. The chemical test results available now, coupled with the additional tests and procedures developed for the site remediation plan/1/, allow for more accurate forecasting and mitigation of project impacts, and facilitate proper resolution of public health and safety considerations during project implementation.

Four locations on the property were selected for soil sampling and chemical analysis. Three samples were taken in areas of shallow fill where historic industries were once located, and one deeper (composite) sample was collected close to the location of the project's proposed elevator pit.

The soil samples were analyzed for a full spectrum of organic and inorganic parameters. (Provisions of San Francisco's Maher ordinance were used as a guideline.) Three contaminants were detected: extractable lead and polynuclear aromatic hydrocarbons (PNAs) at concentrations deemed by the State of California to be hazardous, and petroleum hydrocarbons at a concentration that typically requires cleanup. All three contaminants were found in a single sample taken at the approximate location of a former service station. The extractable lead value was 12 mg/l. The total PNA concentration was 120 mg/kg; included in that total were hazardous concentrations of two carcinogenic PNAs: benzo(a)anthracene at 14 mg/kg and benzo(a)pyrene at 10 mg/kg. The tainted soil sample also contained petroleum hydrocarbons at 1400 mg/kg. A petroleum release was postulated as the origin of the contamination.



During field work, fill pipes for underground storage tanks were noted at several locations on the property. The underground storage tank installations might also pose an environmental hazard for project construction.

On the basis of the early test results, it was recommended that a remediation plan be prepared for handling and cleanup of contaminated soils during site development; that the locations of underground storage tanks and associated piping be surveyed; and that underground storage tanks on the site be remediated in accordance with San Francisco Department of Public Health guidelines, under the supervision of the Underground Storage Tank unit and the San Francisco Fire Department. It is public policy that any underground storage tanks that are under sidewalks on the perimeter of the project be removed.

A remediation plan has been prepared for the site, and provides for the collection of approximately thirty soil samples, spaced in a grid pattern across the site and analyzed for the contaminants of concern. Additional samples would be collected and tested in areas found to be contaminated. The remediation plan includes provisions to minimize threats to public health and the environment that might result from handling the hazardous soil, including a dust control program, provisions for stockpiling, testing, and disposal of the hazardous soil, and verification testing of soil substrate. At the completion of remediation, all hazardous wastes identified in the excavation area would have been relocated and properly disposed, and any hazardous wastes remaining in the underlying soils would be encapsulated on the site./1/

#### GROWTH INDUCEMENT (pp. 94 to 95)

The project would add about 118,500 sq. ft. of retail space, 60 to 80 affordable dwelling units, and 780-800 parking spaces (720 spaces for the retail use and 60-80 spaces for the residential use) to the site. The retail portion of the project would be expected to include about 75-85 full time jobs and 75-85 part time jobs. About 125-225 persons would be expected to live in the residential component of the project. As there would be a net increase in employment as well as a net increase in residents, there could be an increase in the demand for retail goods and business service in the project area.

The project could have growth-inducing effects by demonstrating a market for bulk-merchandise type retail space and/or low-income residential housing in the area; this could encourage similar development on lots currently vacant or occupied by underused buildings in the area.

### C. MITIGATION MEASURES

Some of the measures identified that would mitigate potentially significant environmental effects are presented below. A full recitation of mitigation measures proposed as part of the project or proposed for consideration are presented on pp. 96-102.

#### MEASURES PROPOSED AS PART OF THE PROJECT

- During the construction period, construction truck movement would be permitted only between 9:00 a.m. and 3:30 p.m. Monday through Friday to minimize peak-hour traffic conflicts. The project sponsor and construction contractor would meet with the Traffic Engineering Division of the Department of Parking and Traffic, the Fire Department, MUNI and the Department of City Planning to determine feasible traffic mitigation measures to reduce traffic congestion during construction of this project and other nearby projects. To minimize cumulative traffic impacts due to lane closures during construction, the project sponsor would coordinate with construction contractors for any concurrent nearby projects that are planned for construction or which later become known.
- The Tenth Street parking lot access would be restricted to an entrance only with no exiting. Through traffic on Tenth Street during the p.m. peak period is often heavy, whereas Bryant Street is relatively free flowing during this period. Exiting traffic from the project would be directed to use the Bryant Street exit.
- Adequate space would be provided in the parking lot to accommodate all project truck maneuvers on the project site.
- A Site Remediation Plan has been prepared to manage cleanup of soils contaminated with lead, petroleum, and polynuclear aromatic hydrocarbons. The remediation plan provides for collection of approximately thirty soil samples, spaced in a grid pattern across the site and analyzed for the three contaminants of concern. Additional samples would be collected and tested in areas found to be contaminated, especially in the vicinity of test sample TB-2. The remediation plan includes provisions to minimize threats to public health and the environment that might result from handling the hazardous soil, including a dust control program, provisions for stockpiling, testing, and disposal of the hazardous soil, and verification testing of soil substrate. At the completion of remediation, all hazardous wastes identified in the excavation area would have been relocated and properly disposed, and any hazardous wastes remaining in the underlying soils would be slated for encapsulation on the site (paved over). The remediation plan has been submitted to the San Francisco Department of Public Health for review and certified by an independent third party./1/
- A site-specific Health and Safety Plan has been prepared and would be implemented before site activities would proceed. The plan, which is applicable to all activities at the site prior to completion of remediation, establishes policies and procedures to protect workers from potential hazards posed by hazardous wastes. The Health and Safety Plan has been prepared according to National Institute for Occupational Safety and Health guidelines; it has been submitted to the San Francisco Department of Public Health for their examination and incorporated into the Site Remediation Plan.



- A geotechnical survey would be performed during site preparation to locate all underground storage tanks (USTs) on the property, including those under the sidewalks. In accordance with San Francisco Department of Public Health regulations, all USTs on the site would be remediated under the supervision of the Health Inspector for underground storage tanks. BAAQMD Regulation 8, Rule 40, "Aeration of Contaminated Soil and Removal of Underground Storage Tanks," would apply during underground storage tank removal or handling of soil contaminated with petroleum or other volatile organic chemicals. Tank removal would be done in coordination with the San Francisco Fire Department.
- The project sponsor would employ licensed hazardous waste specialists to handle the project's hazardous waste disposal needs in order to promote application of most modern, effective and efficient methods of waste treatment and disposal.
- A closure report describing the remediation process and certifying completion of remediation would be prepared by a Registered Environmental Assessor, registered engineer, or registered geologist. The closure report is a requirement of the remediation plan. The report would contain full remediation documentation, including chain-of-custody forms, laboratory analysis reports, and hazardous waste transport manifests. The report would be submitted to the San Francisco Department of Public Health.

#### MEASURES THAT COULD BE IMPLEMENTED BY PUBLIC AGENCIES

- A separate left-turn lane would be required in the westbound direction at the intersection of Eleventh / Harrison Street to facilitate acceptable LOS operations (LOS D) at this location during the period of peak-month traffic. This separate left-turn lane could be accommodated by removing parking on the south side of Harrison Street for 200 feet east of the intersection or by transitioning eastbound Harrison Street from two lanes to one lane at this intersection. Year 2000 conditions would be mitigated by this measure from LOS F to LOS D/E ( $V/C=0.91$ ), with operating conditions borderline unacceptable.
- Coordinate work schedules of Pacific Gas and Electric Company and other utilities requiring trenching, so that street disruption would take place during weekends and off-peak hours. This should be done through the San Francisco Committee for Utility Liaison on Construction and Other Projects (CULCOP). In-street utilities should be installed at the same time as the street is opened for construction of the project to minimize street disruption. It is public policy that any underground storage tanks that are under sidewalks on the perimeter of the project be removed.
- The City could act upon or endorse the implementation of transportation mitigations described in the *Mission Bay EIR* Vol. II, Section VI.E, Mitigation, pp. VI.E.214-VI.E.217 for the year 2000 and VI.E.224-VI.E.231 for 2020, and in the *South of Market EIR*, pp. 189-194. The measures for the year 2000 include: constructing and maintaining rail rapid transit lines from downtown San Francisco to suburban corridors and major non-downtown centers in San Francisco; increased funding for Vehicle Acquisition Plans for San Francisco and regional transit agencies to expand existing non-rail transit service; providing exclusive transit lanes on City streets and on freeways; reducing incentives to drive by discouraging long-term parking; encouraging carpools, vanpools, and bicycle use; improving pedestrian circulation within downtown San Francisco; and providing transportation brokerage services. The *Mission Bay EIR* describes various types of measures to illustrate the magnitude of improvements needed to mitigate the impacts of regional growth in 2020.

## **D. ALTERNATIVES TO THE PROPOSED PROJECT**

### **ALTERNATIVE A: NO PROJECT**

This alternative would entail no change to the site. The proposed project would not be built. The parking lot on the site would be retained. If the No Project Alternative were implemented, none of the impacts associated with the project would occur. This alternative would preserve the option to develop a similar or different type of building on the site in the future.

### **ALTERNATIVE B: COSTCO STORE ONLY**

This alternative would consist of the retail component of the project, and would not contain any housing. The site would be developed with 118,500 sq. ft. of retail space, 4,500 sq. ft. of loading area, 480 sq. ft. of open space, and 346,970 sq. ft. of parking (about 720 spaces). As with the proposed project, an additional 170 parking spaces could be constructed at a later date. As with the proposed project, parking in excess of 651 spaces (434 required spaces and 217 accessory spaces) could be provided as a principal permitted use if available for use by the operators, employees, clients, and/or visitors of a permitted, or approved conditional, non-residential use in the vicinity, per Section 817.28 of the *City Planning Code*. As this alternative would not contain any housing, Conditional Use authorization for residential use would not be required. As with the project, the Costco Wholesale store would be elevated on a podium on the southern portion of the site (along Bryant Street) with parking located below and adjacent to the store. The FAR of this alternative would be 0.55:1, the same as for the retail component of the proposed project.

Visibility of this alternative in mid- and long-range views, construction noise impacts, and the potential during construction for encountering subsurface hazardous materials or cultural resources would be similar to the project. As with the project, this alternative would provide 75-85 full time jobs and 75-85 part time jobs. This alternative would have the same retail-related trip generation as the proposed project (about 5,840 weekday trips and about 6,640 Saturday trips under normal circumstances, and about 7,800 weekday trips and about 8,800 Saturday trips during the peak month). This alternative would not have the residential-related trip generation identified for the project (about 210 weekday and Saturday vehicle trips). Consequently, traffic and air quality effects on local intersections would be incrementally lower under this alternative.



## ● ALTERNATIVE C: REDUCED PARKING

This alternative would consist of the same types and amounts of uses as the proposed project except that the retail component of the project would include about 650 rather than 720 parking spaces. The square footage of the retail component's parking area would be the same as with the proposed project, but the configuration of parking spaces within the area would yield about 650 rather than 720 spaces. The site would be developed with 118,500 sq. ft. of retail space, 4,500 sq. ft. of loading area, 480 sq. ft. of open space, and 346,970 sq. ft. of parking. The site would also be developed with 60 to 80 dwelling units above 60 to 80 residential parking spaces. As with the proposed project, an additional parking level (containing about 150 parking spaces for this alternative) could be constructed at a later date. Such additional parking, in excess of 651 spaces (434 required spaces and 217 accessory spaces), could be provided as a principal permitted use if available for use by the operators, employees, clients, and/or visitors of a permitted, or approved conditional, non-residential use in the vicinity, per Section 817.28 of the *City Planning Code*. As with the project, the Costco Wholesale store would be elevated on a podium on the southern portion of the site (along Bryant Street) with parking located below and adjacent to the store. The FAR of this alternative would be 0.55:1, the same as for the proposed project.

Visibility of this alternative in mid- and long-range views, construction noise impacts, and the potential during construction for encountering subsurface hazardous materials or cultural resources would be similar to the proposed project. As with the project, this alternative would provide 75-85 full time jobs and 75-85 part time jobs. This alternative would have the same retail-related trip generation as the proposed project (about 5,840 weekday trips and about 6,640 Saturday trips under normal circumstances, and about 7,800 weekday trips and about 8,800 Saturday trips during the peak month). This alternative would also have the same residential-related trip generation identified for the project (about 210 weekday and Saturday vehicle trips).

The proposed parking supply for the retail component of the project of about 650 spaces would exceed the estimated parking demand for all conditions except peak conditions in the peak month. Peak parking demand on a Saturday during the peak month (i.e., December) would create an approximate 140-space deficit. This unmet demand would result in a combination of spillover parking onto on-street spaces and queuing of vehicles at the entrance to the parking garage by customers waiting for an on-site parking space rather than walking the distance from an off-site parking space to

the store. The spillover into on-street spaces, however, would not be an impact because on-street parking occupancy on Saturdays is about 55% in the project area.

#### ALTERNATIVE D: HOUSING WITH PUBLIC OPEN SPACE

This alternative would consist of approximately 1,075 dwelling units, 1,075 residential-serving parking spaces, and 10,000 sq. ft. of publicly accessible open space to primarily serve residents that would occupy the site under this alternative. This alternative would not contain any retail uses. This alternative would have a dwelling unit density of one unit per 200 sq. ft. of lot area (excluding the 10,000 sq. ft. that would be used for public open space), the allowable dwelling unit density for the site. As with the proposed project, residential use would be subject to Conditional Use authorization.

The *Recreation and Open Space Element* of the *San Francisco Master Plan* identifies the South of Market area as a "high need area" for public open space, and the *South of Market Plan*, an Area Plan contained within the *San Francisco Master Plan*, identifies the project site as one of two proposed large park opportunity sites in the South of Market area.<sup>2/</sup> The 10,000 sq. ft. of publicly accessible open space included in this alternative would be in addition to private open space required for residential units by Section 135(d) of the *City Planning Code*, and could serve residents in areas adjacent to the project site.

Visibility of this alternative in mid- and long-range views, construction noise impacts, and the potential during construction for encountering subsurface hazardous materials or cultural resources would be similar to the project. This alternative would provide approximately 1,075 dwelling units, about 995-1,015 more than the proposed project. Assuming no vacancies, approximately 1,720-3,010 persons would be expected to live in housing provided in this alternative, as opposed to 125-225 persons expected to be accommodated by the residential component of the proposed project. Trip generation under this alternative would be about 2,820 weekday and Saturday vehicle trips, lower than the combined retail and residential vehicle trips identified for the project (about 6,050 weekday trips and about 6,850 Saturday trips under normal circumstances and

about 8,010 weekday trips and about 9,010 Saturday trips during the peak month). Consequently, traffic and air quality effects on local intersections would be correspondingly lower under this alternative.

NOTES - Summary

- /1/ The remediation plan, titled *Costco Wholesale Hazardous Waste Site Mitigation Plan*, prepared by Environmental Science Associates, Inc. in October 1991 and reviewed and certified by Levine-Fricke in November 1991, is on file at the Office of Environmental Review, Department of City Planning, 450 McAllister Street, San Francisco.
- /2/ San Francisco Department of City Planning, *Recreation and Open Space, an Element of the Master Plan*, July 1987, and *South of Market Plan, an Area Plan of the Master Plan*, April 1990.



## **II. PROJECT DESCRIPTION**

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### **A. PROJECT SPONSOR'S OBJECTIVES**

Costco Wholesale Corporation proposes to construct a 40 foot tall mixed-use development containing retail and residential components on the project site. The project architect is Heller & Leake of San Francisco. The project sponsor's objectives are to provide a Costco store accessible to residents of San Francisco neighborhoods and to construct 60 to 80 affordable housing units in an area that could benefit from additional affordable housing.

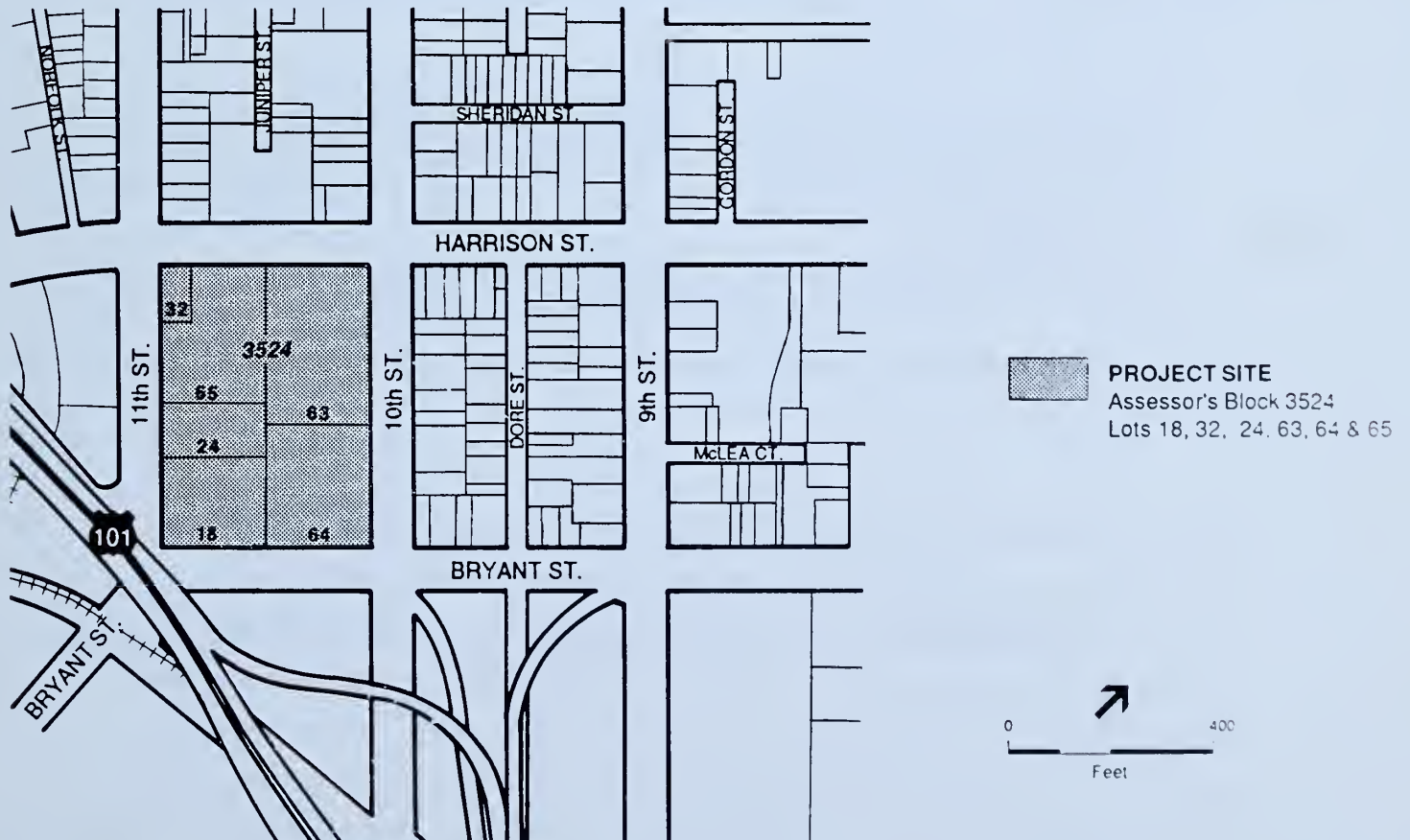
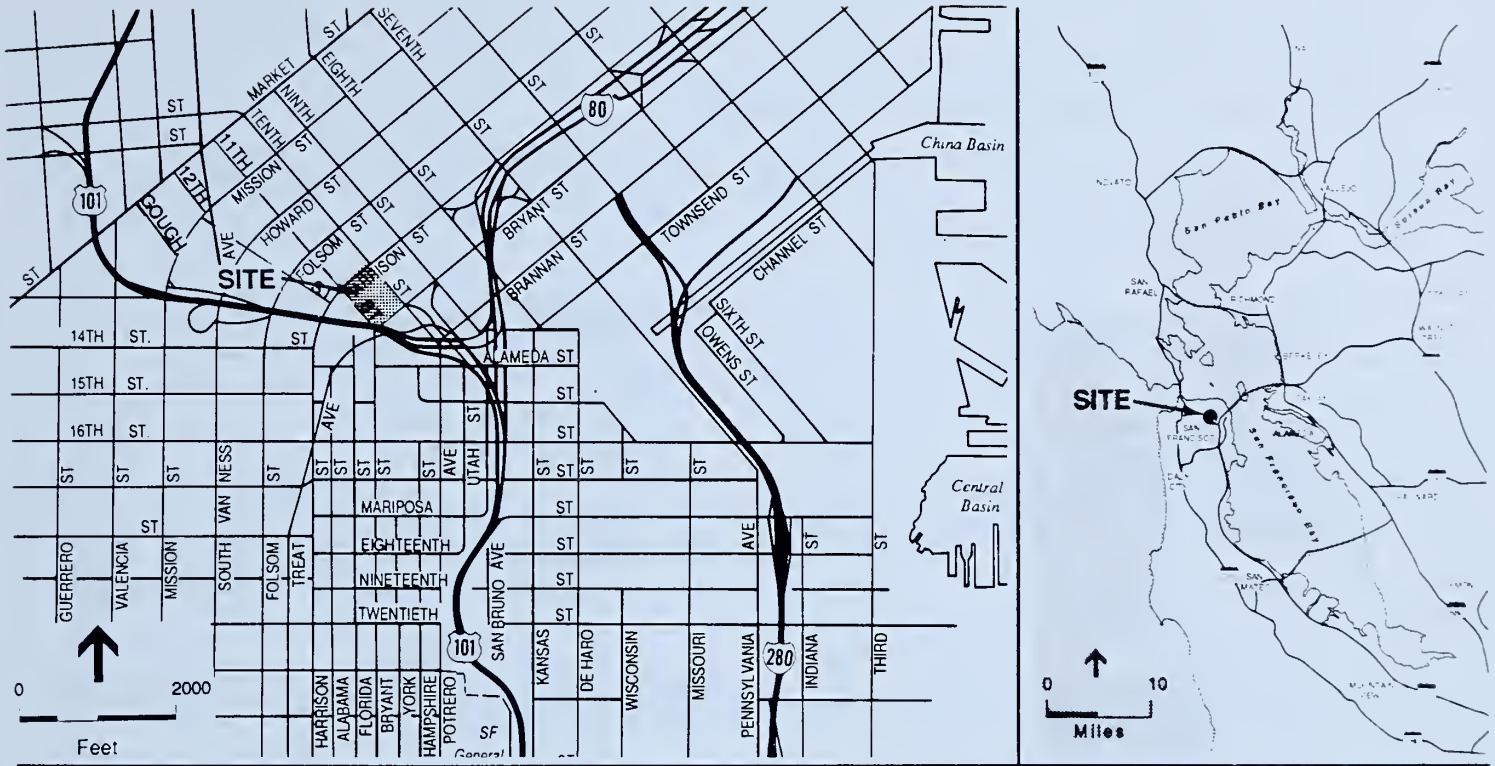
### **B. PROJECT LOCATION**

The proposed project would be located on the block bounded by Tenth, Eleventh, Harrison and Bryant Streets, Lots 18, 24, 32, 63, 64 and 65 of Assessor's Block 3524 (See Figure 1). The site is located five blocks south of Market Street adjacent to the U.S. 101 Freeway. The U.S. 101 on-ramp is across the street from the project site at the southeast corner of Tenth and Bryant Streets, and the South Van Ness off-ramp overpass borders the project site at the corner of Eleventh and Bryant Streets. The 225,500 square foot (sq. ft.) site currently contains a 46,250 sq. ft. paved surface parking lot with approximately 130 short-term and long-term parking spaces and a 179,250 sq. ft. paved vacant lot which was used by the San Francisco Police Department as a storage lot for impounded vehicles through September 1990. The only structure existing on the site is a chain link fence which surrounds the property. The site is in the SLI (Service / Light Industrial) Use District and the 40-X Height and Bulk District. Retail uses are a principal permitted use in the SLI district. The permitted floor area ratio (FAR) for commercial use in the SLI Use District is 2.5:1.

### **C. PROJECT CHARACTERISTICS**

Project characteristics are summarized in Table 1 on p. 16. The project would consist of two major components: a Costco Wholesale store and a residential complex. Each would have its own associated off-street parking. Floor plans and elevations are shown in Figures 2 through 6, pp. 17 to 21.

## II. Project Description



SOURCE: Environmental Science Associates, Inc.

Costco Wholesale ■

**Figure 1**  
Project Location



TABLE 1: PROJECT CHARACTERISTICS

SIZE OF SITE: 225,500 sq. ft.

**RETAIL COMPONENT**  
(202,950 sq. ft. of site)

Allowable Height	40 ft.
Proposed Height	40 ft.
Allowable Parking Spaces	651
Proposed Parking Spaces/a/	720
Floor Area (sq. ft.)	
Retail	118,500
Loading	4,500
Parking (720 spaces)	346,970
Open Space	480
Allowable FAR	2.5:1
Proposed FAR	0.55:1

**RESIDENTIAL COMPONENT/b/**  
(22,550 sq. ft. of site)

Allowable Height	40 ft.
Proposed Height	40 ft.
Residential Component Use	
Residential	60 - 80 units
Parking	60 - 80 spaces
Allowable Dwelling	
Unit Density	1:200 sq. ft.
Proposed Dwelling	
Unit Density	1:325-435 sq. ft.

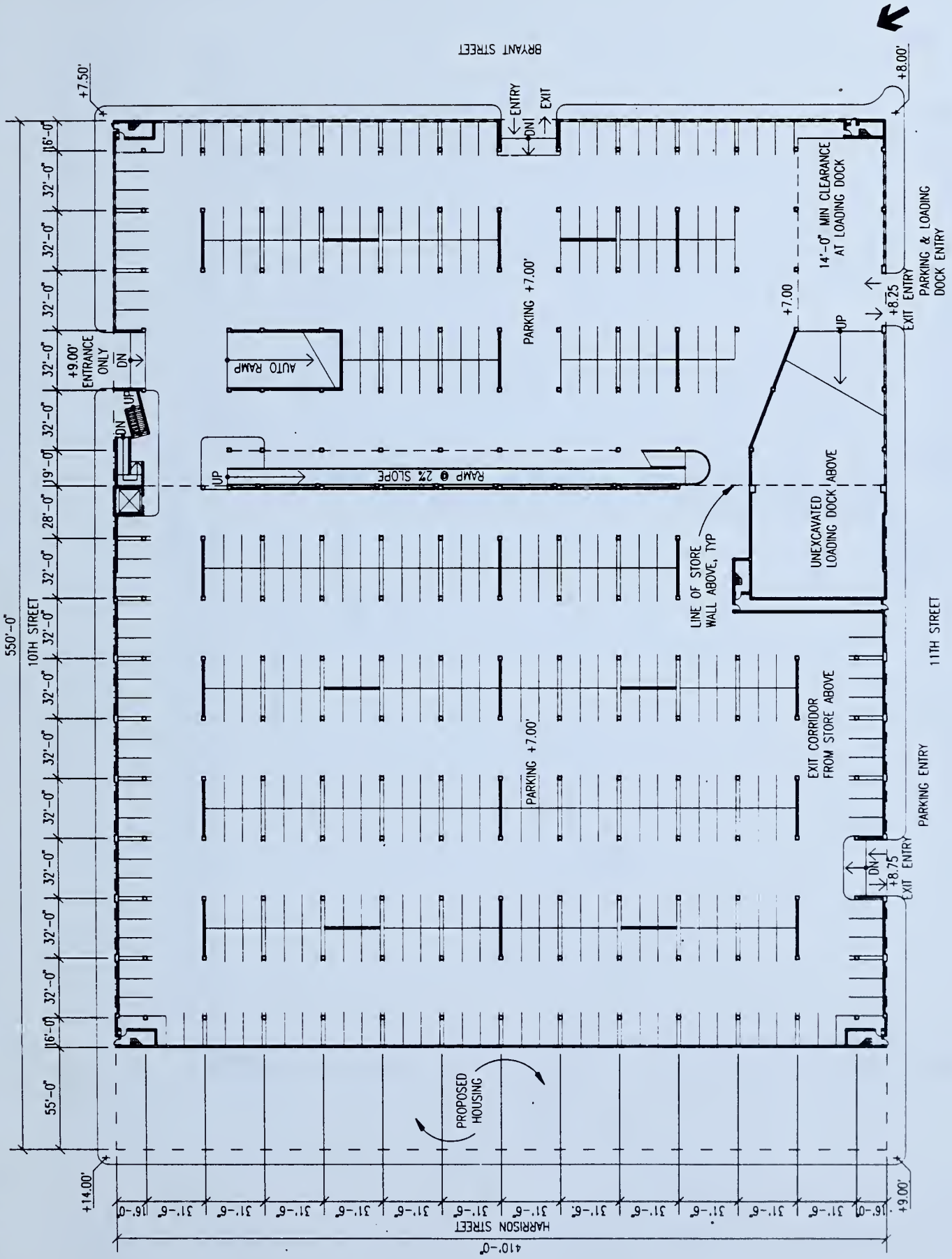
- /a/ Retail-serving parking in excess of 651 spaces (434 required spaces and 217 accessory spaces) could be provided as a principal permitted use if available for use by the operators, employees, clients, and/or visitors of a permitted, or approved conditional, non-residential use in the vicinity, per Section 817.28 of the *City Planning Code*.
- /b/ Dwelling units would be subject to Conditional Use authorization for low-income housing in the SLI District, pursuant to Section 817 of the *City Planning Code*.

SOURCE: Environmental Science Associates, Inc., and Heller & Leake.

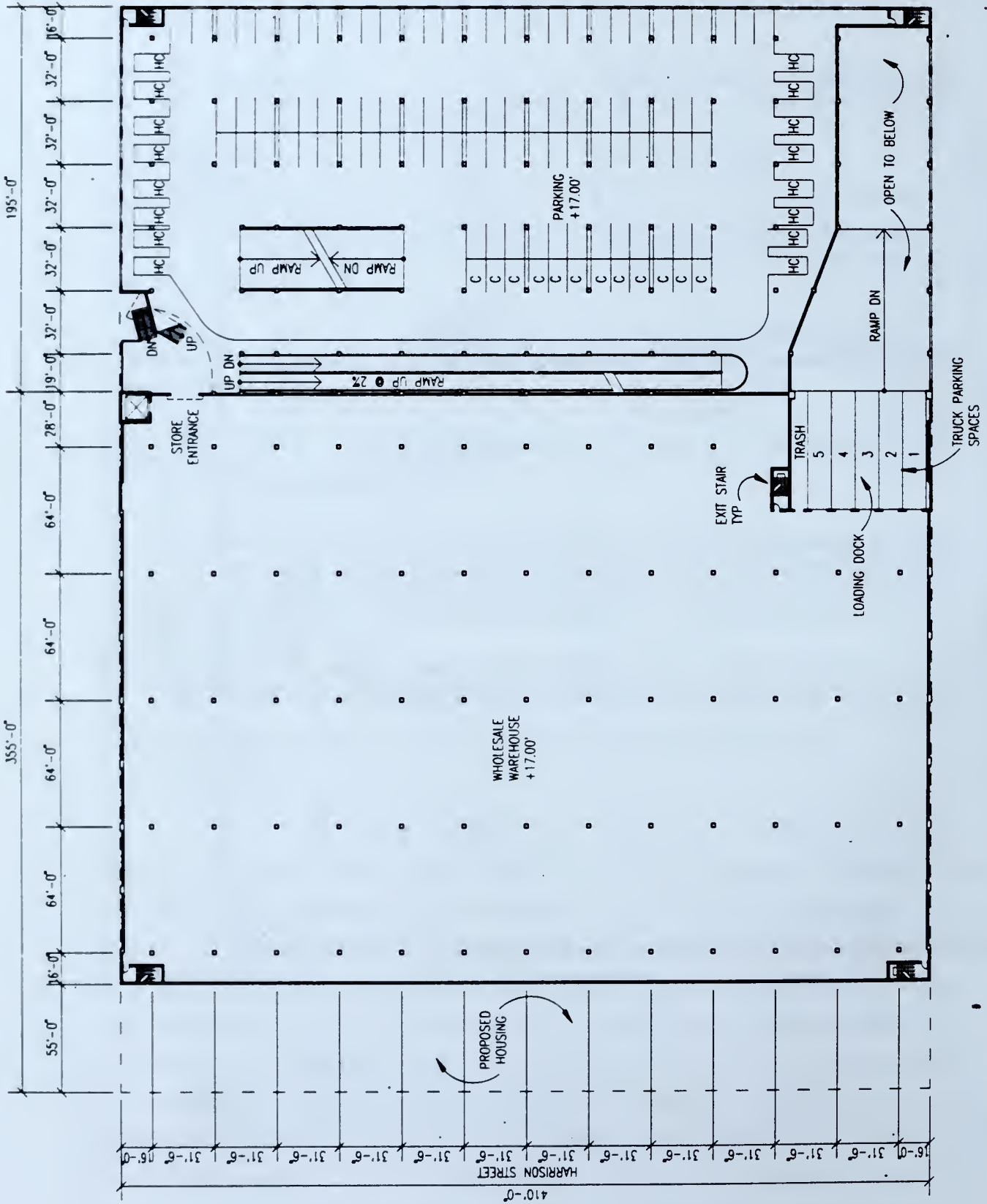
The retail component of the project, located on the southern portion of the site (along Bryant Street) would contain approximately 198,450 sq. ft. of parking (about 430 spaces) at ground level. The Costco Wholesale store, consisting of approximately 118,500 sq. ft. of retail space and 4,500 sq. ft. of loading area, would be elevated approximately ten feet above ground level on a podium along with an additional 68,570 sq. ft. of parking (about 120 spaces). A partial third level over the podium would contain 79,950 sq. ft. of parking (about 170 spaces). There would be a total of approximately 346,970 sq. ft. of off-street parking (about 720 spaces) serving the retail use including customer, employee and accessory parking. The structural system of the project would be designed so that a fourth level of parking could be added at a later date (unspecified at this time), so that there could be a total of approximately 890 off-street parking spaces serving the retail use. Retail-serving parking in excess of



Costco Wholesale  
**Figure 2**  
 Level 1 Floor Plan

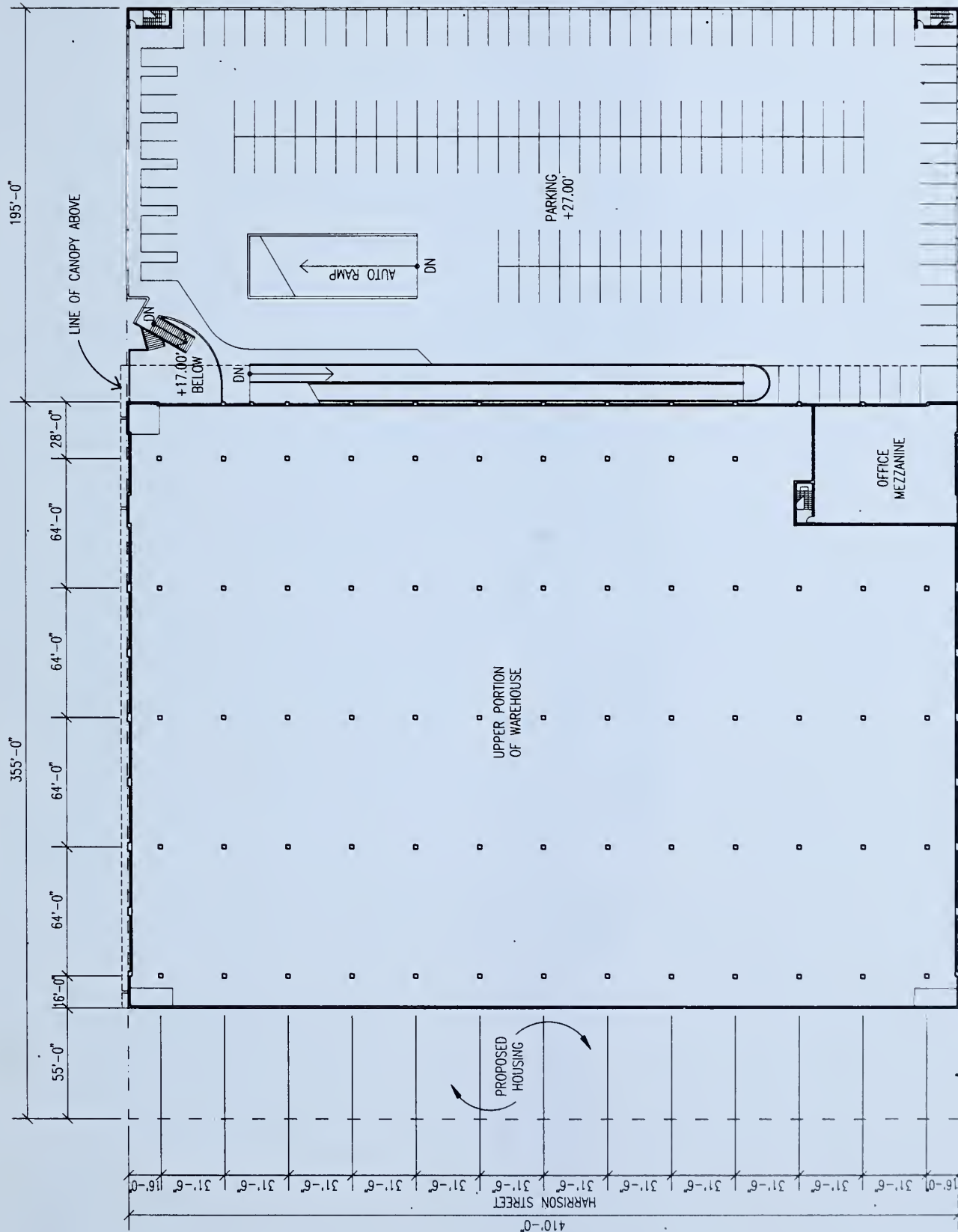


SOURCE: Heller and Leake



Costco Wholesale  
**Figure 3**  
 Level 2 Floor Plan

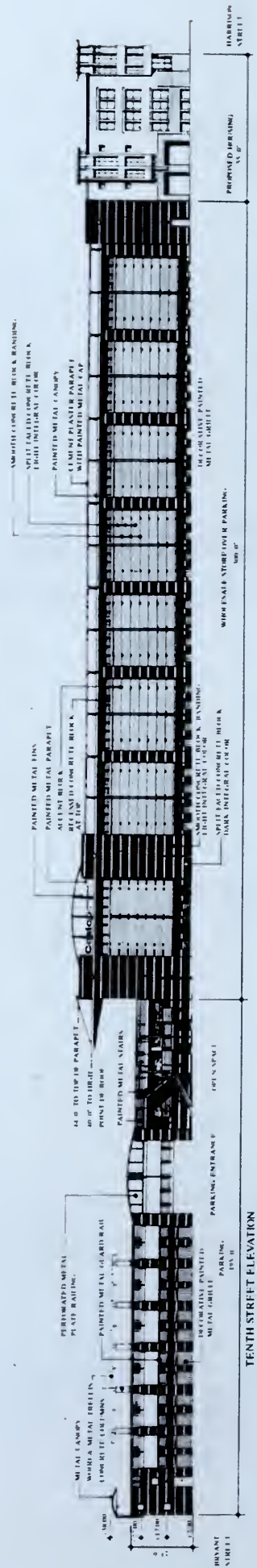
SOURCE: Heller and Leake



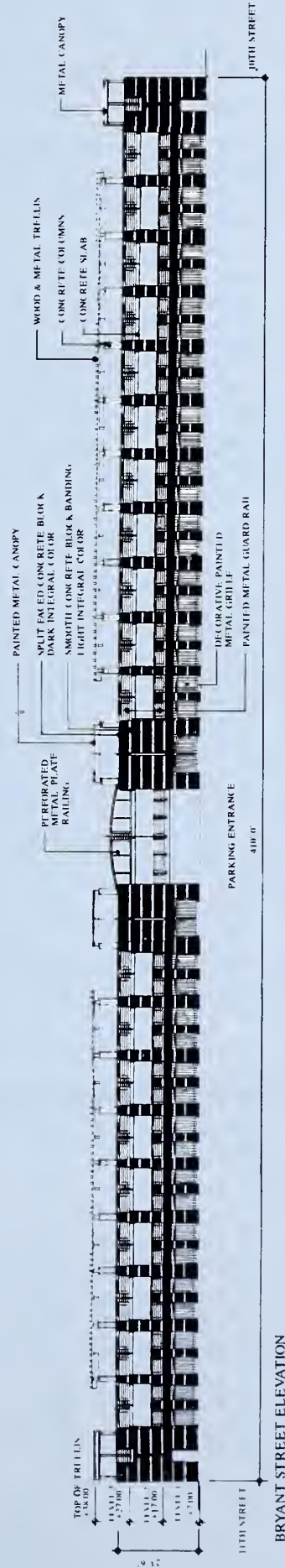
Costco Wholesale  
**Figure 4**  
 Level 3 Floor Plan

SOURCE: Heller and Leake





Costco Wholesale  
**Figure 6**  
 Bryant Street Elevation



SOURCE: Heller and Leake

651 spaces (434 required spaces and 217 accessory spaces) could be provided as a principal permitted use if available for use by the operators, employees, clients, and/or visitors of a permitted, or approved conditional, non-residential use in the vicinity, per Section 817.28 of the *City Planning Code*. Approximately 480 sq. ft. of open space containing benches, trees, ground cover and art work would be located along Tenth Street adjacent to the building entry. The FAR of the retail component of the project would be about 0.55:1.

The residential component of the project, located on the northern portion of the site (along Harrison Street) would be a 40 foot tall building containing 60 to 80 dwelling units above 60 to 80 residential parking spaces at ground level. Open space for the units would be required to be provided on-site. Dwelling unit density would be limited to one unit per 200 sq. ft. of lot area in the SLI district; the dwelling unit density of the residential component of the project would be approximately one unit per 325-435 sq. ft. of lot area. Low-income, affordable housing and group housing are the only types of residential uses permitted in an SLI district, subject to Conditional Use authorization. As stated in Section 803.5(f) of the *City Planning Code*, in order to be deemed "low-income, affordable housing," the dwellings must be rented, leased or sold at rates or prices affordable to a household with an income no greater than 80 percent of the median income for households in San Francisco. The residential portion of the project would be either sold or ground-leased by the project sponsor and could be operated by a separate owner in the future.

As there are currently no buildings on the project site, the project would not require the demolition of any existing structures.

#### **D. PROJECT SCHEDULE, COST AND APPROVAL REQUIREMENTS, AND MASTER PLAN POLICIES**

##### **PROJECT SCHEDULE AND COST**

The project sponsor expects environmental review, project review and detailed design to be completed by early 1992. If the project were approved and building permits issued, construction would take about 10-12 months. Total construction cost would be about \$7,500,000 (1989 dollars).

##### **APPROVAL REQUIREMENTS**

Following a public hearing before the City Planning Commission on the Draft EIR, responses to written and oral comments will be prepared. The EIR will be revised as



appropriate and presented to the City Planning Commission for certification as to accuracy, objectivity and completeness. No project approvals or permits may be issued before the Final EIR is certified.

- The inclusion of low-income housing in the SLI district would be subject to Conditional Use authorization. The City Planning Commission would hold a public hearing to consider the project's application for Conditional Use authorization in accordance with Section 303 of the *City Planning Code* and would adopt a motion approving, approving with conditions, or disapproving the project. If the project were to be approved by the City Planning Commission, the project sponsor must obtain building and related permits from the Central Permit Bureau of the Department of Public Works. An application for a Site Permit for the project has not been filed to date.

On November 14, 1986, the voters of San Francisco passed Proposition M, the Accountable Planning Initiative, which established eight Priority Policies. These policies are: preservation and enhancement of neighborhood-serving retail uses; protection of neighborhood character; preservation and enhancement of affordable housing; discouragement of commuter automobiles; protection of industrial and service land uses from commercial office development and enhancement of resident employment and business ownership; earthquake preparedness; landmark and historic building preservation; and protection of open space. Prior to issuing a permit for any project which requires an Initial Study under CEQA or adopting any zoning ordinance or development agreement, the City is required to find that the proposed project or legislation is consistent with the Priority Policies. The City Planning Commission, in its decision regarding the proposed request for conditional use required for project approval or disapproval would make a determination of the project's conformance with the Priority Policies.

### MASTER PLAN POLICIES

The *San Francisco Master Plan* contains objectives and policies which would apply to the proposed project. The following objectives and policies of the Commerce and Industry and Residence Elements of the City's *Master Plan*, and the *South of Market Plan*, a part of the *Master Plan*, apply to the proposed project.

Objective 2 of the Commerce and Industry Element "maintain and enhance a sound and diverse economic base and fiscal structure for the city" and Policy 1 of Objective 2 "seek to retain existing commercial and industrial activity and to attract new such activity to the city" would apply to the project, because the project would provide about 170 full and part time jobs as well as provide space for commercial activities. The project would address Policy 1 of Objective 3 which states "promote the attraction, retention and expansion of commercial and industrial firms which provide employment improvement opportunities for unskilled and semi-skilled workers." The proposed warehouse-type retail use would provide entry level employment opportunities for unskilled and semi-skilled workers.

The project would address Residence Element Objective 1, "provide new housing for all income groups in appropriate locations," Residence Element Objective 5 "provide housing affordable by all income groups, particularly low and moderate income households," and *South of Market Plan* Objective 3 "encourage the development of new housing, particularly affordable housing." The project would provide 60 to 80 low-income, affordable dwelling units, which are defined as units affordable to households with incomes no greater than 80 percent of the median income for households in San Francisco.

The project site is noted as a "Proposed Large Park Opportunity Site" in the *South of Market Plan*; the project would foreclose that opportunity for development of a park on the site for the foreseeable future.

### III. ENVIRONMENTAL SETTING

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#### A. LAND USE AND ZONING

##### LAND USE

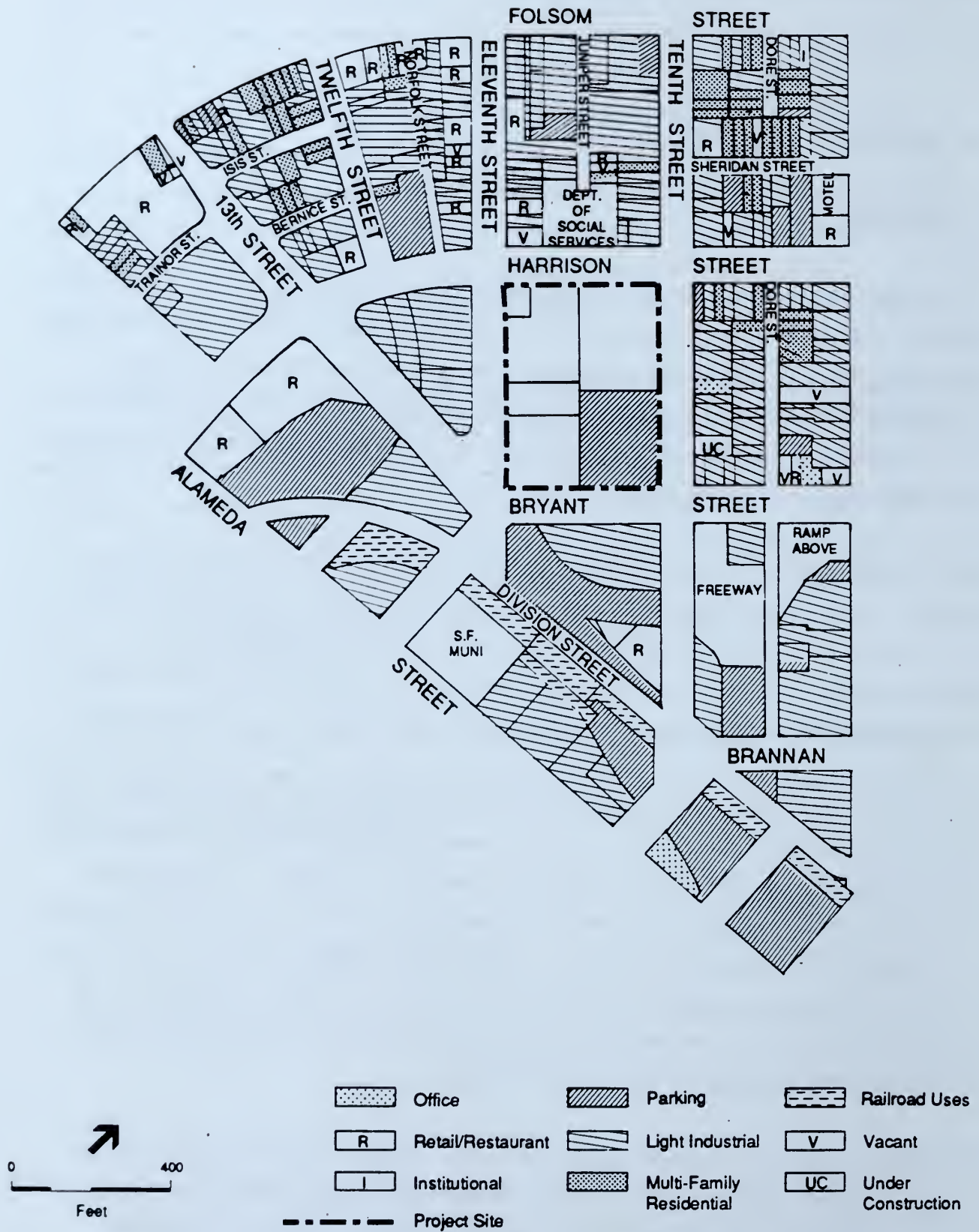
The project site occupies the block bounded by Tenth, Eleventh, Harrison and Bryant Streets. The site is located five blocks south of Market Street adjacent to the U.S. 101 Freeway. The U.S. 101 on-ramp borders the site at Tenth and Bryant Streets; the South Van Ness off-ramp overpass borders the site at Eleventh and Bryant Streets. The project site is located near the western border of the South of Market Area, and is just north of the Showplace Square Area.

The 225,000 square foot (sq. ft.) site currently contains a 46,250 sq. ft. paved surface parking lot with approximately 130 short-term and long-term parking spaces and a 179,250 sq. ft. paved vacant lot which was used by the San Francisco Police Department as a storage lot for impounded vehicles through September 1990. The only structure existing on the site is a chain link fence which surrounds the property.

Land uses in the project site vicinity are shown in Figure 7. Building space in the area is a mixture of light-industrial, institutional, commercial and multi-family residential uses. Automotive repair and paint shops dominate the area north of the project site. Across the street from the site at 1440 Harrison Street is the San Francisco Department of Social Services, where food stamps are distributed and applications for other county social services are accepted. This facility is one of the area's few institutional uses. Businesses adjacent to the site include the American Brenner Brush Company, the McGuire Company and the Veteran Cab Company.

Residential structures in the vicinity of the project site are located along Dore Street between Folsom and Bryant Streets, along Tenth Street between Folsom and Harrison Streets, and on Folsom, Isis and Bernice Streets between Twelfth and Thirteenth Streets. These buildings are typically three-story flats and apartments. Occasionally, residential units are found in structures above ground-story commercial uses. Buildings in the project vicinity are generally one- to three-story structures of concrete, brick, and wood materials of various colors. Most are built to property lines





SOURCE: Environmental Science Associates, Inc., and Lee & Praszker

Costco Wholesale ■

**Figure 7**  
Land Use Map

and contain relatively little or no landscaping. Some of the buildings share common architectural elements including scale and proportion, texture, patterns of facade and window treatments. The project area also has some vacant buildings, due largely to the decline in industry in the high-cost Bay Area. The Showplace Square Area (roughly bounded by Bryant, Seventh and Division Streets) is located approximately two blocks southeast of the site, and has been developed with wholesale and showroom type activities.

#### ZONING

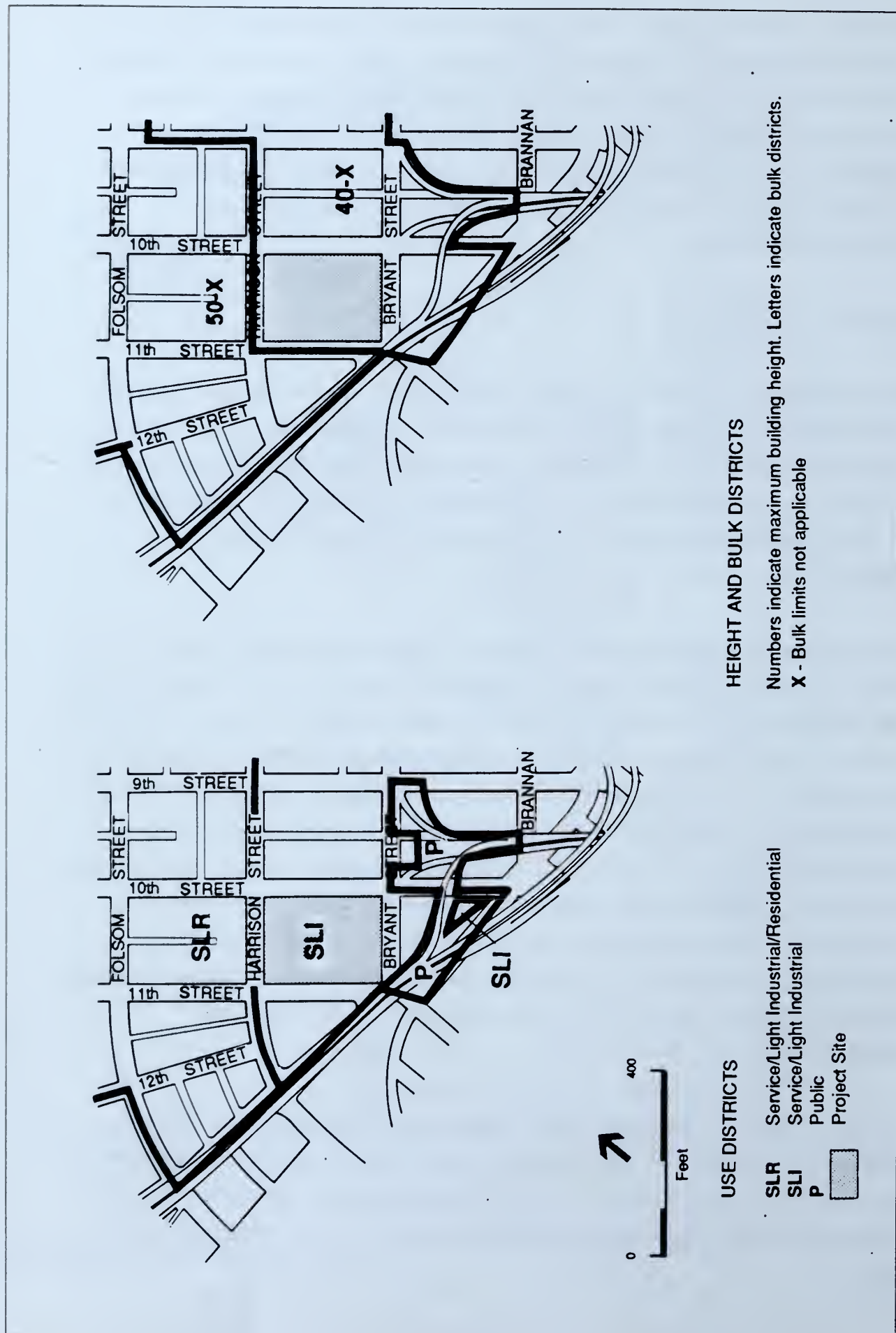
The project site is in the Service / Light Industrial (SLI) Use District (see Figure 8). The surrounding area includes both SLI and Service / Light Residential (SLR) Use Districts. Permitted uses in SLI districts include retail, general commercial, personal and business service, light industrial, institutional, cultural arts, artisan and parking uses. SLR districts contain all of the permitted uses found in SLI districts plus residential uses.

The permitted Floor Area Ratio (FAR) for commercial use in the SLI district is 2.5:1. FAR is the ratio of gross floor area of buildings on a site to the size of the lot. Certain types of building area are exempt from the calculation of gross floor area and therefore would not count towards the FAR limit; parking and residential space is included in this category. Low-income, affordable housing and group housing are the only types of residential uses permitted in an SLI district, subject to Conditional Use authorization. In order to be deemed "low-income, affordable housing," the dwellings must be rented, leased or sold at rates or prices affordable to a household with an income no greater than 80 percent of the median income for households in San Francisco (*City Planning Code* Section 803.5(f)). Maximum dwelling unit density allowed would be one unit per 200 sq. ft. of lot area (*City Planning Code* Section 817.03).

The site is in the 40-X Height and Bulk District in which the maximum allowable height is 40 ft. (see Figure 8). In the X bulk district there are no building bulk limits. Certain rooftop structures such as mechanical penthouses are exempt from the basic 40-foot height limit. These exempt structures, however, cannot exceed ten feet in height.



Costco Wholesale ■ **Figure 8**  
Planning Code Use Districts  
and Height and Bulk Districts



SOURCE: San Francisco City Planning Code



Off-street parking is required for projects in the SLI district based upon use or activity. The off-street parking requirement for retail use is one parking space per 500 sq. ft. of occupied floor area up to 20,000 sq. ft., plus one space for every 250 sq. ft. of occupied floor area in excess of 20,000 sq. ft. (Section 151 of the *City Planning Code*). Additional parking up to 50 percent of the required number of parking spaces could be provided as accessory parking as per Section 204.5 of the *City Planning Code*. Parking beyond this amount could be provided as a principal permitted use if available for use by the operators, employees, clients, and/or visitors of a permitted, or approved conditional, non-residential use in the vicinity, per Section 817.28 of the *City Planning Code*. The requirement for dwelling units is one space per unit.

Open space is required for projects in the SLI district based upon use or activity. The open space requirement for commercial use in the SLI district is one sq. ft. of open space per 250 sq. ft. of commercial development, as per Section 135.3 of the *City Planning Code*. The requirement for dwelling units in the SLI district is 36 sq. ft. of usable open space per unit (Section 153 of the *City Planning Code*).

#### **B. CULTURAL RESOURCES**

Archival research was conducted regarding the possibility of encountering artifacts on the project site.<sup>1/</sup> The project site was historically situated near the edge of Mission Bay, within the marshy drainage of Mission Creek, until the 1860s. The history of the project site is one of almost continuous commercial and industrial development since the late 19th century.

During the Prehistoric Period (ca. 6000 B.C. - A.D. 1775), the portion of the project site that was located above the original shoreline of Mission Bay may have represented a favorable setting for encampments of aboriginal hunters and gatherers. A number of prehistoric sites have been recorded in the South of Market area within a one mile radius of the project site. Analysis of the locations and characteristics of these prehistoric deposits, particularly an evaluation of their proximity to the marshes bordering Mission Bay and Mission Creek, suggests that similar prehistoric cultural materials may exist within or adjacent to the proposed project site.

During the Spanish and Mexican Periods (1776 - 1845), it is unlikely that there was any activity that would regularly have brought anyone to the project site or its

immediate surroundings. During the Early American and Early Gold Rush Periods (1846 - 1852), available archival documentation suggests that the proposed project area remained in a completely natural state. The 1852 U.S. Coast and Geodetic Survey

Map shows that there was no development within the subject parcel during the Early Gold Rush Period. Both Harrison and Bryant Streets extended only half a block west of Third Street, and the southern corner of the project site, bordered by Bryant and Eleventh Streets, was transected by Mission Creek near its outlet into Mission Bay. The remainder of the site was unclaimed riparian marshlands adjacent to Mission Creek. The likelihood of encountering deposits of cultural resources from these eras appears remote.

During the Later Gold Rush Period (1853 - 1860), in spite of intensive development to the east of the proposed project site in the early and mid-1850's, the present subject area remained in a relatively undeveloped state. The 1857 and the 1859 editions of the U.S. Coast and Geodetic Survey maps of San Francisco show that the project site was occupied by a few structures of varying shapes and dimensions between Harrison Street and Mission Creek.

Archival sources indicate the subject parcel was filled and subsequently graded at some point during the late 1860s and early 1870s. It is likely that a diverse quantity of cultural refuse may have been deposited within the project site during filling and grading activities. The 1887 Sanborn Insurance Company map shows the project block completely sectioned, with the addition of Juniper Street, running parallel to Tenth and Eleventh Streets, bisecting the block. This map shows the project site developed with dwellings of various sizes, stables, a coal and wood yard, and the Milwaukee Brewery.

The character of the project site remained essentially unchanged until the Earthquake and Fire of 1906. Following this event, the project site became home to a variety of structures. The 1913 Sanborn Insurance Company map, updated to 1929, shows the project site developed with numerous dwellings, storage and office spaces, as well as an auto garage and various industrial uses. The Milwaukee Brewery was rebuilt on a portion of the site. All of these structures have since been demolished.

#### NOTE - Cultural Resources

- /1/ An archaeological resources report titled *Archival Cultural Resources Evaluation of the Proposed Costco Development Project, San Francisco; California* was prepared for the proposed site by Allen G. Pastron, Ph.D., of Archeo-Tec, February 1990, and is on file at the Office of Environmental Review, Department of City Planning, 450 McAllister Street, San Francisco.



#### C. TRANSPORTATION

The entire square-block site has been used for long-term parking or vehicle storage. The northwestern portion of the site is currently a public parking facility of approximately 130 spaces (this number varies somewhat depending on placement of signs and storage of vehicles on-site). The public parking facility is an unattended self-park facility with numbered spaces and a "parking bank" with numbered slots for collecting parking fees. Access to the parking facility is provided from both Eleventh Street and Harrison Street. This facility was observed to be less than 50 percent utilized during both weekday and Saturday peak periods.

The southern portion of the site was, until recently, being used by the San Francisco Police Department as a storage lot for impounded vehicles. This operation had been in place for approximately 18 months and was established to store abandoned vehicles. Police Department personnel indicate that the lot capacity is about 800 spaces and that duration of stay ranged from two weeks to several months. The impounding operation was phased out and moved in September 1990 to a new location situated at Pier 50 in San Francisco./1/

The site is served by local streets and by portions of the regional freeway system (see Figure 1, p. 15). Access to the freeway and the East Bay via the Bay Bridge is provided by an on-ramp at Bryant and Eighth Streets (about 1,700 ft. east of the site). Access to the freeway and the Peninsula is provided by an on-ramp at Bryant and Tenth Streets (at the southeastern corner of the site). Traffic headed to the North Bay generally travels along Van Ness Avenue (U.S. 101) and Franklin Street. Access from the freeway system to the project site is provided by off-ramps at Bryant and Ninth Streets (about 800 ft. east of the site) and at Harrison and Eighth Streets (about 1,500 ft. east of the site).

The Loma Prieta earthquake of October 1989 had notable effects on the regional transportation network; repairs to most facilities have yet to be effected, with the exception of the Bay Bridge, where one span of the upper deck collapsed in the earthquake. Repairs were completed one month later and operations have returned to pre-earthquake patterns.

Within San Francisco, major damage to State Route 480 (the Embarcadero Freeway), the I-280 extension north of U.S. 101, and the U.S. 101 ramps between Fell and Turk

Streets caused closure of these routes. The section of I-280 between Army Street and Fourth Street was repaired and has reopened. The section of I-280 between Army Street and U.S. 101 is scheduled to be repaired by 1994./2/

In April 1990, Mayor Agnos proposed that the City demolish the elevated Embarcadero Freeway. Demolition of the structure was approved, initiated in February 1991 and completed in October 1991. Mayor Agnos has proposed constructing a depressed roadway within the same right-of-way. The feasibility of implementing this roadway and the sources of funding that would be required are being studied by City staff at the Mayor's direction and will be subject to separate environmental review.

In addition, the "terminal separation structure," the elevated connector between the Bay Bridge and the Embarcadero Freeway, will be demolished, as will as its on- and off-ramps at Folsom Street. Caltrans District 4 plans to replace the terminal separation with a new structure (which would be lower in height than the existing structure) to enable traffic flow between the Bay Bridge and whatever roadway replacement is constructed within the Embarcadero right-of-way./3/

Caltrans also is proceeding with demolition of the U.S. 101 elevated structure (the Central Skyway) north of the Oak/Fell Street on- and off-ramps. This demolition, which will result in removal of the Gough/Turk Streets on-ramp and the Franklin Street/Golden Gate Avenue off-ramp, began in July 1991 and is expected to be completed by the end of 1991. The effects on surface streets of removing this portion of the freeway from service will depend on what replacement facility, if any, is agreed upon by Caltrans and the City of San Francisco, but could include alterations in local traffic patterns in the vicinity of Civic Center and the area around Market Street and South Van Ness Avenue. Street improvements, including new signalization, would likely be made to surface streets designated as replacements for the demolished elevated portion of U.S. Highway 101.

Finally, in Oakland, the Cypress Structure of I-880, demolished following its partial collapse in the Loma Prieta earthquake, is proposed to be rebuilt to the west of the original route./2/

In the vicinity of the project site, Eleventh, Bryant and Harrison Streets are designated as Transit Preferential Streets, on which priority is given to transit vehicles over autos



during commute and business hours on weekdays./4/ Tenth, Ninth, Bryant and Harrison Streets are designated as Primary Vehicular Streets, which the *Master Plan* defines as "major routes for automobile and truck movements into and out of the Downtown area." Ninth and Tenth Streets are proposed Commuter Bike Streets.

Harrison Street is two-way west of Tenth Street, with two lanes in each direction. Adjacent to the site, eastbound traffic on Harrison Street is required to merge into one lane and turn right onto Tenth Street. East of Tenth Street, Harrison is one-way westbound and carries five lanes of traffic. Bryant Street is one-way eastbound and carries five lanes of traffic. Eleventh Street is a two-way street with two lanes in each direction. Tenth Street is one-way southbound with four travel lanes. Ninth Street is one-way northbound with five travel lanes.

The site is served by San Francisco Municipal Railway (MUNI) motor coach lines, providing radial service to and from the downtown area, and community service routing around the periphery of downtown. MUNI bus lines operate on Eleventh, Bryant and Harrison Streets near the project site. The closest MUNI bus stops to the project site are on Eleventh Street at Harrison and Bryant Streets, serving the 9-San Bruno, and on Harrison and Bryant Streets at Tenth Street, serving the 27-Bryant and 42-Downtown Loop. MUNI Metro light-rail vehicle lines are accessible via the Van Ness Station located four blocks north of the project site on Market Street accessible via the 9-San Bruno and 42-Downtown Loop. Transit routes and bus stops in the project vicinity are shown in Figure 10, p. 68.

Regional transit service is provided to and from the East Bay by the Bay Area Rapid Transit District (BART) at the Civic Center Station on Market Street, four blocks north and two blocks east of the site. Service to the Peninsula is provided by the San Mateo County Transit District (Samtrans), with bus routes and stops along Ninth and Tenth Streets.

The RIDES carpool program, operating as a nonprofit publicly funded corporation, provides consulting and matching services to help establish Bay Area carpools and vanpools.

Parking surveys of on-street parking indicate that approximately 1,830 spaces are in a two-block radius from the proposed Costco site, which are close to or fully utilized on weekdays./5/ The parking area designated as "primary" (i.e., within one block of the



site and on the same [north] side of the U.S. 101 freeway) contains about 640 spaces and was found to be 94% occupied on a typical weekday and 55% occupied on a Saturday. Outside the "primary" area, there are about 1,190 spaces, and weekday occupancy was at 101%; Saturday occupancy was at 62%. Surveys of the existing public parking lot on the site indicate usage levels of about 45% on a weekday and about 20% on a Saturday.

#### NOTES - Transportation

- /1/ Frank Pardella, Traffic Administration, San Francisco Police Department, telephone conversation, October 4, 1990.
- /2/ Lisa Murphy, Public Information Officer, California Department of Transportation, telephone conversations, April 23, 1991 and October 15, 1991.
- /3/ Greg Bayol, Public Information Officer, California Department of Transportation, telephone conversation, June 13, 1991.
- /4/ San Francisco Department of City Planning, *Transportation, an Element of the Master Plan*, November 1984, and *Downtown Plan, an Area Plan of the Master Plan*, December 1987.
- /5/ Based on surveys at the project site conducted by Wilbur Smith Associates on Saturday, December 2, 1989, and Wednesday, December 6, 1989. See Appendix B, pp. A.33-43 for a summary of the parking inventory and usage surveys conducted for this analysis.

#### **D. AIR QUALITY**

The Bay Area Air Quality Management District (BAAQMD) operates a regional monitoring network which measures the ambient concentrations of six air pollutants: ozone (O<sub>3</sub>), carbon monoxide (CO), fine particulate matter (PM<sub>10</sub>), lead (Pb), nitrogen dioxide (NO<sub>2</sub>), and sulfur dioxide (SO<sub>2</sub>). On the basis of the monitoring data, the Bay Area, including San Francisco is designated a non-attainment area with respect to the federal ozone and CO standards. In addition, San Francisco occasionally experiences violations of state eight-hour CO and PM<sub>10</sub> standards. A three-year summary of the data collected at the BAAQMD monitoring station nearest the project site (about 0.7 miles southeast at 10 Arkansas Street) is shown in Appendix C, p. A.44, together with the most stringent corresponding state and/or federal ambient air quality standards in San Francisco. During 1989, there were no violations of the state or federal eight-hour CO standards, and there were 13 violations of the state 24-hour average PM<sub>10</sub> standard. During 1988, there was one violation of the state and

federal eight-hour CO standard and five violations of the state 24-hour average PM<sub>10</sub> standard in San Francisco. In 1987, there was one violation of the state and federal eight-hour average CO standard and four violations of the state PM<sub>10</sub> standard./1/

CO concentrations are monitored from both the 10 Arkansas Street areawide monitoring station and from 939 Ellis Street, which is located along Van Ness Avenue, a heavily traveled corridor.

In December 1985, the City of San Francisco monitored CO and counted traffic at the intersection of Sixth and Brannan Streets. This data, along with CO background data from the Potrero District air quality station, was used to correlate the relationship between traffic and CO emissions. Data from these two monitoring locations indicate that areas in San Francisco near streets with high traffic volumes and congested flows may experience violations of the eight-hour CO state and federal standard under adverse meteorological conditions.

Comparison of these data with those from other BAAQMD monitoring stations indicates that San Francisco's air quality is among the least degraded of all the developed portions of the Bay Area. Three of the four prevailing winds blowing off the Pacific Ocean, west, northwest, and west-northwest, reduce the potential for San Francisco to receive pollutants from elsewhere in the region.

Data from air quality monitoring within San Francisco show that there have been occasional local violations of state and federal CO and state (but not federal) fine particulate standards, due largely to pollutant emissions from within the City. CO is a non-reactive air pollutant and its major source is motor vehicles. CO concentrations are generally highest during periods of peak traffic congestion. Particulate levels are relatively low near the coast, increase with increasing distance from the coast, and peak in dry, sheltered valleys. The primary sources of particulates in San Francisco are demolition and construction activities, and motor vehicle travel on paved roads.

San Francisco, like all other sub-regions in the Bay Area, contributes to regional air quality problems, primarily ozone in other parts of the Bay Area. Ozone is not emitted directly from sources, but is produced in the atmosphere over time and distance through a complex series of photochemical reactions involving hydrocarbon (HC) and nitrogen oxide (NO<sub>x</sub>) emissions, which are carried downwind as the photochemical reactions occur. Ozone standards are violated most often in the Santa Clara,



Livermore, and Diablo Valleys, because local topography and meteorological conditions favor the buildup of ozone and its precursors there.

In 1983, emissions from motor vehicles were the source of 87 percent of the CO, 39 percent of the HC, 62 percent of the total suspended particulates (TSP), 9 percent of the sulfur oxides (SO<sub>x</sub>), and 54 percent of the NO<sub>x</sub> emitted in San Francisco.<sup>/2/</sup> These percentages are expected to apply reasonably well to current conditions.

In response to the Bay Area's ozone and CO non-attainment designations, the Association of Bay Area Governments (ABAG), BAAQMD, and the Metropolitan Transportation Commission (MTC) prepared and adopted the *1982 Bay Area Air Quality Plan (1982 Plan)*.<sup>/3/</sup> The *1982 Plan* established schedules and strategies to comply with federal ozone and carbon monoxide standards established under the Clean Air Act by December 31, 1987. The deadline has now passed, and the Bay Area remains a non-attainment area for ozone and CO (standards are occasionally violated). The Clean Air Act Amendments of 1990 require that within three years of enactment (November 15, 1990) the State submit to the Environmental Protection Agency (EPA) a revised State Implementation Plan.

Effective January 1, 1989, the California Clean Air Act provides for the designation of districts by pollutant into three classes: moderate (defined as a district that the California Air Resources Board (ARB) determines can attain the state air quality standards by December 31, 1994), serious (a district that the ARB determines cannot attain the state air quality standards until after December 31, 1994 but by no later than December 31, 1997), and severe (a district that the ARB determines cannot attain the state air quality standards until after December 31, 1997 or is unable to specify an attainment date). In each case, the Act specifies strategies that must be adopted. In all cases, plans are required to demonstrate a five percent reduction per year in district-wide emissions for each non-attainment pollutant or its precursors unless the ARB determines that the alternative emission reduction strategy is equal to or more effective than district-wide emission reductions in improving air quality or that despite inclusion of every feasible measure and an expeditious adoption schedule, the district is unable to achieve a five percent reduction per year. The Bay Air Basin has been designated as severe, due to its inability to attain state standards by 1997.<sup>/4/</sup>



NOTES - Air Quality

- /1/ State standards for particulate matter changed in 1983 and federal standards changed in 1987 to concentrate on respirable particulate matter (PM<sub>10</sub>) which has been demonstrated to have health implications when inhaled. The previous state and federal particulate standards were 100 micrograms per cubic meter (ug/m<sup>3</sup>) and 260 ug/m<sup>3</sup> of particulates, respectively. The present state and federal PM<sub>10</sub> standards are 50 ug/m<sup>3</sup> and 150 ug/m<sup>3</sup>, respectively, of respirable particulate matter. Although both the previous and present particulate standards are measured in ug/m<sup>3</sup>, under the PM<sub>10</sub> standards only those particulates 10 microns or less in size are measured. The BAAQMD (Thomas Perardi) has stated that TSP includes about 50% to 60% of particulates of 10 microns or less; thus, the TSP standards are generally equivalent to the PM<sub>10</sub> standards. BAAQMD is presently monitoring PM<sub>10</sub> at seven Bay Area monitoring stations, including the station at 16th and Arkansas Streets in San Francisco.
- /2/ Bay Area Air Quality Management District (BAAQMD), "Base Year 1983 Emissions Inventory, Summary Report," San Francisco, California, August 1987.
- /3/ Association of Bay Area Governments (ABAG), BAAQMD, and MTC, *1982 Bay Area Air Quality Plan*, Berkeley, California, December 1982.
- /4/ Association of Bay Area Governments, Bay Area Air Quality Management District, and Metropolitan Transportation Commission, *Bay Area '91 Clean Air Plan (CAP)*, Draft, April 1991.

**E. HAZARDOUS MATERIALS**

BACKGROUND

Although the project site is paved and used only for vehicle parking now, the property and surrounding neighborhood have a history of industrial, manufacturing, and commercial land uses. Soils tests (described in this section under "Test Results") have confirmed that storage, use or disposal of hazardous materials from past and current activities have affected soils and groundwater at the project site. Development of the site could result in excavation or discovery of such materials.

Certain chemical and physical properties of a substance may cause it to be considered hazardous. Under state law, hazardous properties are grouped into four general categories: toxic, ignitable, corrosive, and reactive./1/ As defined in the *California Code of Regulations (CCR)*, Title 22, Section 66084, a "hazardous material" is a "substance or combination of substances which, because of its quantity, concentration, or physical, chemical, or infectious characteristics, may either (1) cause, or significantly contribute to, an increase in mortality or an increase in serious

irreversible, or incapacitating reversible illness; or (2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of or otherwise managed."

According to the *California Health and Safety Code*, Section 25124, and for purposes of this EIR, a "hazardous waste" is any hazardous material that is abandoned, discarded or in storage prior to recycling. The categories that apply to hazardous materials also apply to hazardous wastes: toxicity, ignitability, corrosivity, or reactivity. For example, soil that is excavated from a site containing hazardous materials would be a hazardous waste if it exceeded specific CCR Title 22 criteria.

Environmental contaminants are not necessarily hazardous materials or hazardous wastes. For purposes of this EIR, soil or water is considered to be contaminated if it contains elevated (above-background) levels of a chemical substance, and if the resulting soil or water has the potential to cause human health effects or adversely affect the natural environment pursuant to established regulatory criteria. Remediation (clean-up) of such materials is invariably required.

#### HAZARDOUS WASTE REGULATORY FRAMEWORK

The generation, storage and handling of hazardous materials and wastes are regulated by various federal, state and local laws and regulations aimed at the protection of public health and the environment. A brief summary of regulations follows; a more detailed discussion of federal and state regulations is presented in Appendix E, pp. A.46-54.

##### Federal and State

- At the federal level, the primary laws governing hazardous wastes and hazardous substances are the Resource Conservation and Recovery Act of 1976 (RCRA), and the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA). Generally, these laws require that responsible parties report any known hazardous waste contamination of soil or groundwater to the U.S. EPA.

At the state level, the California Hazardous Waste Control Law (HWCL) is the state equivalent of RCRA. California regulations incorporate federal standards, but in many respects are stricter. The Department of Toxic Substances Control of the California Environmental Protection Agency enforces state hazardous waste regulations in



### III. Environmental Setting

- California, independently of the Federal EPA, which enforces federal hazardous waste regulations. When hazardous waste is transported for treatment or disposal, hazardous waste manifests must be prepared by the generator. A hazardous waste manifest lists a description of the waste, its intended destination, and regulatory information about the
- waste. A copy of each manifest must be filed with the Department of Toxic Substances Control.

- The Project Area is located within the jurisdiction of the San Francisco Bay Regional Water Quality Control Board (RWQCB), which has the authority to require groundwater investigations and to remediate the site when the quality of the waters of the state are threatened. Clean-up standards employed by the RWQCB can be more
- stringent than those used by EPA or the Department of Toxic Substances Control./2/ If soils containing hazardous materials are excavated, the Bay Area Air Quality Management District (BAAQMD) may impose specific requirements on such activities to protect ambient air quality from dust or airborne contaminants. Among them, the BAAQMD Regulation 8, Rule 40 would apply during underground storage tank removal or handling of soil contaminated with petroleum or other volatile organic chemicals.

#### Local

The San Francisco Department of Public Health, the San Francisco Department of Public Works, and the San Francisco Fire Department are involved directly in the management of hazardous materials and wastes within the City and County of San Francisco.

The Department of Public Health is designated by the State Water Resources Control Board to enforce the state Underground Storage Tank (UST) program. Permitting of underground storage tank installation and removal is overseen by the Department of Public Health. The Department of Public Health also issues permits to businesses that store hazardous materials and conducts inspections on a regular basis to ensure compliance with regulatory requirements. The Department of Public Health, the State Department of Health Services and RWQCB jointly oversee subsurface investigations and remediation at sites containing hazardous wastes.

The Department of Public Works administers Article 20, Ordinance No. 253-86, of the *Public Works Code*. This ordinance, entitled "Analyzing the Soil for Hazardous Wastes," requires soils testing for projects in San Francisco that involve excavation in areas underlain by artificial fill. The ordinance applies to properties in San Francisco



located on the San Francisco Bay side of the original high tide line (or any other sites designated by the Director of Public Works, who has the authority to specify additional sites for study on an individual basis). The project site lies outside the designated high-tide zone, and does not fall under the authority of this ordinance./3/

The San Francisco Fire Department issues permits for the storage of flammable liquids. Permitting and other records associated with the storage of flammable liquids on file at the Fire Department date back to the early 1900s, prior to state and federal involvement in hazardous material and waste management.

Site remediation or development may be subject to regulation by other agencies. For example, if extraction of contaminated groundwater or construction dewatering of a hazardous waste site were required, subsequent discharge of such waters to the stormwater / sewer collection system could require a permit from the Department of Public Works Industrial Waste Division.

#### HAZARDOUS MATERIAL WORKER SAFETY REQUIREMENTS

Properties found to be contaminated are subject to special worker safety requirements both to protect construction workers during demolition and excavation and to protect site investigation and cleanup workers who are performing site studies or site remediation activities. In both instances, site safety plans would be required in compliance with federal and state Occupational Safety and Health Administration (OSHA) requirements. The site safety plan includes provisions for safety training, safety equipment, accident and illness prevention programs, hazardous substance exposure warnings, and emergency response and fire prevention plan preparation. A site safety plan has been prepared for the proposed project and appears as an appendix to the project's remediation plan./4/ Additional information on hazards-related safety requirement is presented in Appendix E, pp. A.46-54.

#### INFORMATION SOURCES

Information evaluated in this report was gathered from available records and from a soil testing survey done at the site concurrent with this EIR. Past and current owners and occupants of the Project site were not consulted. Lee and Praszker Consulting Geotechnical Engineers and Geologists prepared two study reports for the project site: an *Environmental Site Assessment* that presented information on site history, past land uses, underground storage tanks, and agency listings; and a *Foundation Assessment*

### III. Environmental Setting

that provided geotechnical information regarding subsurface conditions./5,6/ In response to information presented in those two assessments, a soil sampling and testing survey was carried out./7/ The assessment reports and the soil survey were the primary sources of information on hazardous materials.

In evaluating the potential for contamination of the project site and adjacent areas, the *Environmental Site Assessment* utilized information from historical archives, such as fire insurance maps prepared by the Sanborn Insurance Company, and database records of federal, state, and local regulatory agencies. Files, maps, data bases, and other information sources reviewed for the preparation of the *Environmental Site Assessment* are documented in that report./5/

While the information presented here is believed to be accurate, no certifications or guarantees can be made to that effect. Because of the imprecise nature of the original information sources, no representation is made that the sites discussed below are the only potentially contaminated areas, nor that the possible contaminants discussed represent the sole hazardous waste-related problems at a particular site. Furthermore, because public agency records are sometimes incomplete, it is possible that remediation of environmental contamination has already occurred at one or more of the sites discussed below.

#### HISTORIC SITE USES AND POTENTIAL SOURCES OF CONTAMINATION

Excluding parked vehicles, no obvious sources of contamination are visible at the project site. All remnants of previous buildings have been removed, and the existing asphalt pavement gives the property a relatively clean appearance.

Historic land uses at the site were evaluated in the Lee and Praszker *Environmental Site Assessment* for their potential to contaminate the site with hazardous wastes./5/ Industrial site uses started prior to the turn of the century. Contamination of site soil or groundwater could have occurred by material spills, leaks, carelessness, accidents, or poor waste handling processes. Potential concerns at the project site include contamination from underground storage tanks, coal yards, foundry wastes, metal works wastes, storage yards, carbon paper manufacturing wastes, and possible contaminated fill. Areas of potential sources of contamination are shown on Figure 9. The following discussion refers to each area by letter (off-site uses) or number (on-site uses) as identified in Figure 9.





SOURCE: Environmental Science Associates, Inc., and Lee & Praszker

Costco Wholesale ■

**Figure 9**  
Potential Sources of  
Site Contamination



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In the late 1880s, the Milwaukee Brewery at 474 Tenth Street (Area 4) had an engine room powered by coal. By the mid-1900s, the engines were powered by fuel oil. While specific records were not found, it is likely that fuel storage tanks existed in the vicinity of the engine room, possibly underground. Similarly, the Pacific Carbon and Ribbon Manufacturing Plant located at 1451 Harrison Street (Area 1) is indicated as having fuel oil steam power in 1929. Although no documentation for a tank at that address was found, the carbon paper plant could also have had an underground fuel tank./5/

At least three heavy industries present on the site in 1929 had potential to cause soil contamination, primarily from heavy metals: the American Brass and Bronze Works foundry at 124 Juniper (Area 8); the Michel & Pfeffer Iron Works at 1415 Harrison Street (Area 2); and the Pacific Meter Works at 499 Eleventh Street (Area 6), where an incinerator was located./5/

Several underground storage tanks (USTs) were on the project site at one time or another. Much soil and groundwater contamination in industrial and commercial areas can be attributed to leaking USTs, which are one of the most common causes of environmental contamination in California. Storage of hazardous materials such as gasoline or diesel fuel below ground mitigates the potential fire hazard posed by the presence of large quantities of fuel. However, if a tank leaks, the escaping contents will contaminate soil adjacent to the leak. If not detected, contaminants from a leaking UST could migrate through the soil and reach the groundwater. Contamination of the groundwater with fuel is considered a serious environmental problem, causing contamination of soil and groundwater that can extend beyond the leak site.

Evidence was found of at least three historic UST installations on the project site:/5/

- Service Station, 400 Tenth Street (Area 3). Station was shown on maps in 1949 and 1950s; gone in 1965. No other documentation. Disposition of tank(s) unknown.
- Peninsula Motor Express Co., 1212 Bryant Street (Area 5). A 550-gallon gasoline UST was permitted in 1944. A note attached to the permit in 1966 states that "no evidence of the tank remains." No other documentation. Actual disposition of tank unknown.
- Burgermeister Brewing Corporation, 470 Tenth Street (Area 7). A 1000-gallon gasoline UST was permitted in 1969. The tank was located under the Eleventh Street sidewalk approximately 200 feet north of Bryant Street. No other documentation. Disposition of tank unknown.

Table 2 lists the site uses identified as being possible sources of soil or groundwater contamination. The approximate locations of potential sources of contamination are shown on Figure 9 on p. 42; locations are keyed to references in Table 2, following, and in Appendix E, pp. A.46-54, where potential sources of contamination from off-site origins are discussed.

Prior to human settlement, this part of San Francisco bordered the Mission Creek drainage, a marshy, low-lying area that drained into Mission Bay, a former cove of San Francisco Bay near the present China Basin. Original soils were windblown sands. Beginning in the late 1850s, the project area was progressively filled with brick, wood, metal fragments, concrete, other rubble, and sand from nearby dunes.<sup>/6/</sup> Other than observations made on the test borings, the exact quality of the fill throughout the project site is unknown. Heterogeneous fill has been implicated as a source of persistent soil contamination (especially lead and other metals) at several development sites in San Francisco.

Finally, buildings constructed prior to the mid-1970s often contained asbestos. The Lee and Praszker report speculates that demolition of buildings on the property could have left asbestos fibers in the upper soil layer.

#### TEST RESULTS

The project site is not situated within the designated area of San Francisco where a "Maher" soils testing report is required; i.e. soils testing for this project is not required by City ordinance. Prompted by concerns over possible health impacts from site development within potentially contaminated areas, the Department of City Planning requested that soil samples be collected and tested for hazardous wastes.

Soil samples were collected at four borehole locations at the Costco project site on March 19, 1991 (see Figure 9, p. 42). Borehole TB-1, near Tenth Street was placed at the location of the proposed elevator pit, where the deepest excavation is planned. Boreholes TB-2, TB-3, and TB-4 were placed at three widely spaced locations expected to contain several feet of relatively shallow fill that might be removed during construction. Sanborn maps indicated the historic businesses that once operated in the vicinity of the three shallow borehole locations were an old service station and the Michel and Pfeffer Iron Works (Areas 3 and 2 in Figure 9; borehole TB-2), the American Brass and Bronze Works (Area 8; TB-3), and the Pacific Meter Works and



TABLE 2: PAST POTENTIAL SOURCES OF CONTAMINATION ON SITE

Map Key/a/	Historic Industry	Type of Use	Potential Contaminants
1	Pacific Carbon & Ribbon, 1451 Harrison St.	Manufacturing; fuel oil tanks	Petroleum hydrocarbons, other organic compounds
2	Michel & Pfeffer Iron Works, 1415 Harrison St.	Foundry	Heavy metals
3	Service Station 400 Tenth St.	UST/b/	Petroleum hydrocarbons
4	Milwaukee Brewery, 474 Tenth St.	Boiler; coal, fuel oil tanks	Petroleum hydrocarbons, other organic compounds
5	Peninsula Motor Express 1212 Bryant St.	UST	Petroleum hydrocarbons
6	Pacific Meter Works 499 Eleventh St.	Incinerator	Heavy metals and organic hydrocarbons
7	Burgermeister Brewing 470 Tenth St.	UST	Petroleum hydrocarbons
8	American Brass & Bronze Works, 124 Juniper St.	Foundry	Heavy metals

/a/ Approximate locations of potential sources of contamination are shown on Figure 9 on p. 42.

/b/ Underground storage tank.

SOURCE: Lee and Praszker, *Environmental Site Assessment*, 1990; Environmental Science Associates, Inc.

the Burgermeister Brewery (Areas 6 and 7; TB-4). One sample was taken near the base of the relatively shallow fill at each of those three boreholes, at approximately four feet at TB-2, five feet at TB-3, and at three feet TB-4./7/

Test parameters for the Costco soil samples were based on the comprehensive analytical guidelines of San Francisco's Maher ordinance./3/ (The Maher ordinance identifies 54 toxic or otherwise hazardous materials to be analyzed.) Because of the



several potential sources of contamination at the site, polynuclear aromatic hydrocarbons were added to the list of parameters to be analyzed at locations TB-2, TB-3, and TB-4, the three sampling locations where historic industries were situated./7/

Given the history of the project site, chemical testing found relatively few indications of contamination, but did identify the presence of extractable lead, polynuclear aromatic hydrocarbons, and petroleum contamination in one sample.

Total concentrations of heavy metals were either not detected or were present near background concentrations in all soil samples collected at the site. None of the samples contained metal concentrations exceeding their Total Threshold Limit Concentrations (TTLCs), the concentrations above which the soils would be considered hazardous wastes in California.

Only one metal, lead, was present at concentrations high enough to warrant supplementary testing for extractability (i.e., solubility under certain environmental conditions). When extractable lead tests were done on the project site samples, one sample (TB-2) had a value of 12 mg/l. The California standard for extractable lead (the Soluble Threshold Limit Concentration or STLC) is 5 mg/l. Soils having concentrations of metals exceeding the STLC values must be considered hazardous wastes upon excavation. (Additional discussion of conditions at borehole TB-2 is presented below.)

Priority pollutant semivolatile organic compounds were not found in two of the three samples analyzed, but in one sample, TB-2, seven polynuclear aromatic compounds (PNAs) were detected, four of them carcinogenic. PNAs are a group of toxic organic compounds that occur naturally and are also produced as by-products when petroleum products are incompletely burned. They are often associated with leaks or spills of petroleum products.

The PNAs detected at the project site were found only in sample TB-2, collected in the vicinity of the former service station at 400 Tenth Street (the corner of Tenth Street and Harrison Street, Area 3 on Figure 9, p. 42). TB-2 is the same sample that exhibited the positive test for extractable lead. Probable sources of both lead and PNAs at this location would be leaks or spills of petroleum products at the service station garage, or possibly from the underground storage tanks. Soil sample TB-2 had an oily quality. A supplementary petroleum analysis ordered for sample TB-2 yielded a test result of

### III. Environmental Setting

1400 mg/kg for total petroleum hydrocarbons, which supports the assumption that petroleum products are the source of the contaminants. In San Francisco, petroleum contamination at any concentration is undesirable./8/

The total PNA presence was spread among seven individual compounds. Four known carcinogens, benzo(a)pyrene, benz(a)anthracene, benzo(b)fluoranthene, and chrysene, were detected. The total concentration of the seven PNAs measured in the soil at TB-2 was 120 mg/kg, and the concentration of the four cancer-causing agents totaled 54 mg/kg.

No hazardous threshold concentration has been defined for PNAs as a class, but in California the Department of Toxic Substances Control as a matter of practice uses guidelines of 100 ppm for total PNA concentration, and 1 ppm for PNAs known to cause cancer./9/ The PNA concentrations measured at location TB-2 exceeded both levels, indicating that soils excavated from this location would have to be treated as a hazardous waste.

On the basis of this preliminary testing, a site remediation plan has been developed that incorporates further extensive analysis and remediation that would be conducted as site preparation would be carried out./4/

#### NOTES - Hazardous Materials

/1/ *Toxic Substances* may cause short-term or long-lasting health effects, ranging from temporary effects to permanent disability, or even death. Carcinogens (substances known to cause cancer) are a special class of toxic substances.

*Ignitable substances* are hazardous because of their ability to burn. Gasoline, hexane and natural gas are examples of ignitable substances.

*Corrosive materials* can cause severe burns or damage materials; these include strong acids and bases, such as lye or sulfuric (battery) acid.

*Reactive materials* may cause explosions or generate toxic gases. Explosives, pure sodium or potassium metal (which react violently with water), and cyanide are examples of reactive materials.

/2/ The RWQCB water quality protection objectives and goals for the San Francisco Bay Region are contained in the *Water Quality Control Plan, San Francisco Bay Basin, Region (2)*, December 1986.

/3/ Provisions of San Francisco's "Analyzing the Soil for Hazardous Waste" ordinance (the "Maher ordinance") call for a site history and soils investigation to be conducted prior to issuance of building permits for development involving excavation of more than 50 cubic yards of soil. If any subsurface material

exceeding hazardous waste standards is discovered during soil sampling activities, additional investigations and/or site remediation, overseen by appropriate state and local agencies, can be required before issuance of a building permit.

- /4/ The remediation plan, titled *Costco Wholesale Hazardous Waste Site Mitigation Plan*, prepared by Environmental Science Associates, Inc. in October 1991 and reviewed and certified by Levine-Fricke in November 1991, is on file at the Office of Environmental Review, Department of City Planning, 450 McAllister Street, San Francisco.
- /5/ Lee and Praszker Consulting Geotechnical Engineers and Geologists, *Environmental Site Assessment: Costco Warehouse Project, Tenth and Harrison Streets, San Francisco, California*, Lee and Praszker, Inc., 147 Natoma Street, San Francisco, California, June, 1990.
- /6/ Lee and Praszker Consulting Geotechnical Engineers and Geologists, *Foundation Investigation: Costco Warehouse Project, Tenth and Harrison Streets, San Francisco, California*, Lee and Praszker, Inc., 147 Natoma Street, San Francisco, California, June, 1990.
- /7/ Environmental Science Associates, Inc., *Costco Wholesale Soil Sampling and Analysis Report*, September 1991.
- /8/ Leslie Lum, Health Inspector, City and County of San Francisco, Department of Public Health, Underground Storage Tanks, telephone conversation, May 31, 1991.
- /9/ Beth Bufton, Toxic Substances Control Division, California Department of Health Services, telephone conversation, June 17, 1991.



#### **IV. ENVIRONMENTAL IMPACTS**

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An application for environmental evaluation for a development proposal on the site was filed on August 25, 1989. On September 20, 1990, on the basis of an Initial Study, the Department of City Planning, Office of Environmental Review, determined that an Environmental Impact Report (EIR) was required. Issues determined as a result of the Initial Study to require no further environmental analysis included: Visual Quality, Glare, Population and Housing, Operational Noise, Construction Air Quality, Shadow and Wind, Utilities / Public Services, Biology, Water Quality, and Energy / Natural Resources. Therefore, this document does not discuss these topics (see Appendix A, pp. A.1-32, for the Initial Study). A discussion of Land Use and Zoning is included to provide an informational context for better understanding of impacts of the project.

##### **A. LAND USE AND ZONING**

###### **CUMULATIVE CONTEXT**

In 2000, there would be about 30,000 workers in the South of Market (SOM) rezoning area within which the project site is located. Employment is forecast to grow by about 6,850 jobs between 1985 and 2000. Total building space in the SOM is forecast to increase from 17.3 million sq. ft. (which includes building space that had already been approved but not yet constructed) to 18.6 million sq. ft. Most growth in the SOM in terms of both employment and space use is expected in office activities. Employment in service and sales activities are expected to show moderate employment growth. Manufacturing and distribution activities employment is expected to remain constant or to decline.

An increase of less than ten percent in total building space is forecast in the SOM area for the Year 2000. The limited increase in space during this timeframe reflects the fact that there is a considerable amount of building space (primarily for office use) that has been approved but is either under construction or yet to be built, in addition to the effects of the proposed reduction in commercial FAR and building heights, and the limitations on further new office development contained in the SOM controls. It also reflects the current supply of vacant space that is available for absorption by employment growth. Much of this vacant space consists of former industrial space

that has been converted to potential office space. Consequently, the net addition of building space to the SOM area, beyond existing and already approved space, would be minimized.

As most of the forecast employment growth in the area is expected to be accommodated in rehabilitated or converted space rather than newly-constructed space, and the controls generally reduce the maximum allowable building envelope, physical building form in the SOM area is not expected to change substantially.

The controls adopted by the City Planning Commission in April 1990 reduce overall development potential and limit office uses in the area. The result will be less pressure to convert existing occupied space to higher-rent-paying office uses than would otherwise occur. This is likely to benefit service uses with a downtown client base, which value proximity to the central business district and would otherwise be competing with office uses for comparable space. It would also benefit newer production activities, "cottage industries" such as film and video production which would be more likely to expand in the area under the Plan than under existing controls. Large space users with older facilities in the area, such as manufacturing and certain distribution activities, may remain in the area longer due to less competition for space from other uses and reduced incentive for resale. In the longer term, however, older manufacturing and distribution businesses will continue to relocate outside the SOM and downtown due to the economic advantages of outlying areas for this kind of activity, including less expensive space for expansion, and convenient access to markets.

#### LAND USE

The proposed project would require the removal of a paved surface parking lot containing approximately 130 short-term and long-term parking spaces and a vacant lot. The proposed project would increase the density of development on the site, adding about 118,500 sq. ft. of retail space, 4,500 sq. ft. of loading area, 480 sq. ft. of open space, and 60 to 80 dwelling units. At project completion there would be a net increase of about 300,720 sq. ft. of parking area (590 spaces) over the 46,250 sq. ft. of the site (130 spaces) presently operated as a public parking lot.

The project would add additional bulk-merchandise type retail uses in the area, similar to the Canned Foods Grocery Outlet located two blocks west of the site on Harrison



Street between Thirteenth and Alameda Streets. The project would also add multi-family residential use to an area presently containing a number of multi-family residential structures.

#### ZONING

The *City Planning Code* contains controls regarding scale, intensity, and location of growth in San Francisco's South of Market Area. The relationship of the project to selected sections of the *City Planning Code* is discussed below.

The proposed project, located within the SLI Use District, would be consistent with the permitted principal and conditional uses designated for this district. Retail uses are a principal permitted use in the SLI district, with a maximum allowable floor area ratio (FAR) of 2.5:1 (FAR is the ratio of gross floor area of buildings on a site to the size of the lot). The FAR of the retail component of the project would be about 0.55:1.

Low-income, affordable housing and group housing are the only types of residential uses permitted in an SLI district, subject to Conditional Use authorization. In order to be deemed "low-income, affordable housing," the dwellings must be rented, leased or sold at rates or prices affordable to a household with an income no greater than 80 percent of the median income for households in San Francisco. Maximum dwelling unit density would be one unit per 200 sq. ft. of lot area in the SLI district; the dwelling unit density of the residential component of the proposed project would be approximately one unit per 325-435 sq. ft. of lot area or 60 to 80 low-income, affordable dwelling units on the project site.

The proposed project is located in the 40-X Height and Bulk District. Structures in this district are allowed a maximum height of 40 feet, excluding certain rooftop structures such as mechanical penthouses which are exempt from the basic 40-foot height limit. These exempt structures cannot exceed ten feet in height. There are no controlling bulk limits in this district. The project, excluding exempt rooftop structures, would be within the 40-foot height limit.

For retail use, Section 151 of the *City Planning Code* requires one parking space for each 500 sq. ft. of occupied floor area up to 20,000 sq. ft., plus one space for every 250 sq. ft. of occupied floor area in excess of 20,000 sq. ft. Additional parking up to 50 percent of the required number of parking spaces are permitted as accessory



- parking under Section 204.5 of the *City Planning Code*. Based on the 118,500 sq. ft. of retail space contained in the project, 434 parking spaces would be required;
- 720 spaces are proposed. Retail-serving parking in excess of 651 spaces (434 required spaces and 217 accessory spaces) could be provided as a principal permitted use if available for use by the operators, employees, clients, and/or visitors of a permitted, or approved conditional, non-residential use in the vicinity, per Section 817.28 of the *City Planning Code*.

For residential use, Section 151 of the *City Planning Code* requires one parking space for each dwelling unit. The project would provide one parking space for each of the proposed 60 to 80 dwelling units.

In the SLI Use District, freight loading spaces are required for retail uses over 50,000 sq. ft. at the ratio of one space per 25,000 sq. ft. of gross floor area (*City Planning Code* Section 152). Based on the 118,500 sq. ft. of retail space contained in the project, five freight loading spaces would be required. The project would provide five freight loading spaces in an area about 60 feet wide and 60 feet deep, which would be accessed from a shared parking and loading entrance along Eleventh Street. The freight loading area would exceed the minimum dimension standards specified in the Code (Section 154(b)) for that number of loading spaces. The proposed freight loading spaces would exceed *City Planning Code* minimum dimension standards in order to meet Costco's needs.

Section 135.3 of the *City Planning Code* requires usable indoor or outdoor open space, accessible to the public, as part of commercial development in the South of Market Area. The ratio of usable open space to new building space is one sq. ft. of open space for every 250 sq. ft. of general commercial development. The project would contain 118,500 sq. ft. of retail space, resulting in an open space requirement of about 480 sq. ft. The project would provide 480 sq. ft. of open space containing benches, trees, ground cover and art work along Tenth Street adjacent to the building entry.

Section 135(d) of the *City Planning Code* specifies that 36 sq. ft. of private usable open space are required for each dwelling unit in the SLI Use District. Common usable open space may be substituted for private open space in the ratio of 1.33 times the required amount of private open space. The project would contain 60 to 80 dwelling units, therefore 2,160-2,880 sq. ft. of private open space or 2,873-3,830 sq. ft. of common open space would be required for the project. The project would include required open space for dwelling units as part of the residential component design.

## B. CULTURAL RESOURCES

An archaeological resources report was prepared for the project site and vicinity by Allen G. Pastron, Ph.D., Archeo-Tec, consulting archaeologists. The report is on file at the Department of City Planning, Office of Environmental Review, 450 McAllister Street, San Francisco./1/ Based on the findings of archival research, there is a possibility, although by no means a confirmed certainty, that prehistoric and/or protohistoric archaeological remains may exist, or may once have existed, within the confines of the project site.

It is possible that prehistoric and/or protohistoric cultural deposits exist within those portions of the project area that may have once been submerged beneath the waters of the bay at the beginning of the historic era. Due to the geological process of subsidence or changing levels of the bay over time, it is conceivable that a Native American shellmound may exist, or may once have existed, within the boundaries of the subject parcel. While there is a possibility of encountering prehistoric or protohistoric cultural resources within the confines of the project area, no firm evidence of the existence of such archaeological materials has been found. The project includes measures to mitigate potential impacts to cultural resources (see mitigation, pp. 96-97).

### NOTE - Cultural Resources

/1/ An archaeological resources report titled *Archival Cultural Resources Evaluation of the Proposed Costco Development Project, San Francisco, California* was prepared for the proposed site by Allen G. Pastron, Ph.D., of Archeo-Tec, February 1990, and is on file at the Office of Environmental Review, Department of City Planning, 450 McAllister Street, San Francisco.

## C. TRANSPORTATION

### CUMULATIVE CONTEXT

#### Introduction

The transportation sections of the *Mission Bay and South of Market Area Plan EIRs* address various regional transportation impacts in 2000 (the *Mission Bay EIR* also analyzes transportation impacts in 2020). The Mission Bay transportation impact analyses evaluate travel generated by Mission Bay in the context of growth in travel



projected for the rest of the City and Bay Area. The South of Market analyses do the same for that area. It is growth in the City and region that would result in the greatest impact on most of the transportation systems studied.

Using slightly different analysis methodologies, the two EIRs employ the same basic screenline approach to study regional transportation impacts of San Francisco employment growth. Results differ somewhat, based on the differences in forecasting techniques, but generally by less than five to ten percent; this difference is well within the range of accuracy of ten year forecasts. Therefore, the two sets of results are compatible. This summary of cumulative transportation effects will report largely from the *Mission Bay EIR*, with *South of Market EIR* results included where there is notable relevant information.

In summary, both EIRs show that by 2000, congested highway conditions would result in a shift from autos to higher use of transit and ridesharing by travelers from the Downtown & Vicinity. The East Bay would be the most congested corridor, the Peninsula would be the least. By 2020, travel demand would exceed the capacity of regional transportation systems. To serve regional growth, expanded transit and freeway systems would be required.

The proposed project is expected to be completed, occupied and the amount of net new space attributable to the project absorbed by 2000. Therefore, the impacts of the project and its contribution to cumulative transportation impacts would occur primarily in the 1985-2000 context. The information from the *Mission Bay EIR* for 2020 was prepared for the purposes of analyzing full buildout impacts of Mission Bay in a proper cumulative context, and is more speculative and subject to change. It is presented for the reader's information.

#### The Analysis Years

The *Mission Bay EIR* analysis includes studies of transportation conditions in the year 2000, and, in order to account for buildout of the Mission Bay planning area, in the year 2020. Analyses for the 1985-2000 timeframe can rely on reasonably confident estimates of regional transportation capacity improvements as defined by the regional agencies' highway and transit planners. There are no regional transportation plans or policies for 2020. Therefore, the *Mission Bay EIR* uses a different approach for this longer-term analysis. For the 2020 analysis, rather than reporting the impacts of future



travel on transportation systems as is the analytical approach for 2000, the estimates of 2020 travel conditions use the transportation system capacities developed for 2000 as a base and identify the types of transportation improvements likely to be necessary to serve growth in travel between 2000 and 2020.

#### Effects of the Loma Prieta Earthquake

While many of the downtown streets and intersections have experienced changes in traffic volumes as a result of closure of damaged freeway segments, most of them are expected to be only temporary. As freeway repairs are completed, traffic is expected to return to its pre-quake patterns. Although not all repair plans have been finalized, it has been necessary to make certain assumptions about the transportation system that would be in place by the year 2000 to provide a reasonable assessment of future conditions. The following two future scenarios were the basis for the transportation analysis:

Freeway Down Scenario A. The Embarcadero Freeway, and the Washington and Clay Street ramps, are assumed to be removed and replaced with a surface roadway. This roadway would be readily accessible from intersecting streets, similar to what will occur once all freeway demolition is completed, and all roadway obstructions removed. Given this level of access, this surface roadway scenario would provide substantially less travel capacity than that of the elevated freeway. The Mission Street / Main Street and Mission Street / Beale Street ramps, or a comparable facility, may or may not be restored at its pre-earthquake location. The section of I-280 between the U.S. 101 interchange and Army Street are assumed to be repaired or replaced with facilities of comparable capacity. U.S. 101 ramps at Turk Street and Golden Gate Avenue are assumed to be demolished. While no definitive replacement facility, if any, has been selected, the effects of this demolition are expected to be limited to some alteration of local traffic patterns in the general vicinity of Market Street and South Van Ness Avenue and the Civic Center.

The primary effect of this scenario would be that traffic patterns on San Francisco's local street system that served the Embarcadero Freeway operate and would operate differently in the future than before the earthquake; cumulative travel impacts as they would affect the regional highway screenlines reported in the *Mission Bay* and *South of Market EIR* analyses may be the same or possibly lower to the extent access to freeway screenlines is delayed by longer travel times associated with surface street

travel. Therefore, the "Regional Travel" discussion below regarding impacts on highways would still be applicable, if not an overstatement of cumulative impacts on the regional highway system serving San Francisco./1/

Freeway Down Scenario B - Limited Access. This scenario also assumes demolition of the Embarcadero Freeway and the Washington and Clay Street ramps. This scenario is reflective of the type of travel thoroughfare forwarded for further study by Mayor Agnos. This replacement roadway may or may not include subterranean segments, but would have more limited access (i.e. fewer access points to The Embarcadero) than the Freeway Down Scenario A surface roadway described in the preceding paragraphs. The result of this limited access would be that the roadway would have a higher travel capacity (because there would be fewer access points to impede through traffic) than the Freeway Down Scenario A; capacity of this limited access scenario, however, may still be somewhat lower than that formerly provided by the elevated Embarcadero Freeway. The Mission Street / Main Street and Mission Street / Beale Street ramps may or may not be restored at its pre-earthquake location. The section of I-280 between the U.S. 101 interchange and Army Street are assumed to be repaired or replaced with facilities of comparable capacity. U.S. 101 ramps at Turk Street and Golden Gate Avenue are assumed to be demolished. While no definitive replacement facility, if any, has been selected, the effects of this demolition are expected to be limited to some alteration of local traffic patterns in the general vicinity of Market Street and South Van Ness Avenue and the Civic Center.

Because it is assumed the travel capacity of this replacement scenario would approach that formerly provided by the Embarcadero Freeway, future travel conditions at the highway and transit screenlines reported in the *Mission Bay* and *South of Market EIR* analyses would continue to be applicable for describing cumulative impacts.

### Regional Travel

Regional travel was analyzed for each of the three major approaches to San Francisco: the North Bay via the Golden Gate Bridge; the East Bay via the San Francisco-Oakland Bay Bridge; and the Peninsula via the U.S. 101 and I-280 freeways.

The regional travel forecasts assume that where severe congestion is projected for the highway system and where parallel transit and ridesharing systems are available,



travelers would choose to shift from their autos to fill the capacity available in transit and ridesharing systems. Those shifts are assumed to be made by travelers from the Downtown & Vicinity only, because they would have more transit and ridesharing options than travelers from other parts of the City or region. The shift to transit and ridesharing would be greatest for travel to the East Bay, somewhat less to the North Bay, and none would be expected for travelers to the Peninsula by 2000. (*Mission Bay EIR*, Vol. II, pp. VI.E.76-79; *South of Market Plan EIR*, pp. 109-112, C-38-40.)

Growth in the entire Downtown & Vicinity, including the South of Market and Mission Bay, and the rest of the region would be the primary source of travelers trying to cross the Golden Gate and Bay Bridges, and to use the U.S. 101 and I-280 freeways at peak hours. (*Mission Bay EIR*, Vol. II, pp. VI.E.71-83; *South of Market EIR*, pp. C-46-47.)

### North Bay Corridor

The *Mission Bay* and *South of Market EIRs* found that the Golden Gate Bridge and its approaches operated with moderate congestion (driving speeds of about 35 to 45 mph) in peak hours in 1985. By 2000, heavy congestion on the bridge (a driving speed of about 30 mph) would last about two hours during the p.m. commute period if additional transit capacity between downtown and the North Bay were provided, and a substantial shift from autos to transit and ridesharing were made by travelers from the Downtown & Vicinity. If no shift from 1985 transit use levels were to occur, the period of heavy congestion on the Bridge would last for about four hours in 2000.

Golden Gate Transit indicates that it would be able to increase its bus and ferry capacity between downtown and the North Bay by 2000 in response to the demand generated. Golden Gate Bus ridership would almost double, with projected Levels of Service (LOS) of D during the p.m. peak hour and LOS C during the p.m. peak period. Golden Gate ferry ridership would grow by about 60% from 1985 to 2000 and operate at LOS B during the p.m. peak hour and period. Ridesharing is projected to increase by 7 to 15% between 1985 and 2000 in the North Bay.

By the year 2020, heavy congestion on the Golden Gate Bridge could last about four hours, assuming the levels of transit and ridesharing used in 2000, if there were no additional transportation improvements between 2000 and 2020. The *Mission Bay EIR*



indicates that, by that time, the need to consider major new transportation infrastructure and transit systems will have become apparent. The *Mission Bay EIR* provides examples to illustrate the magnitude of improvements that could be necessary; those mitigation measures therefore are not prescriptive, but indicative of the level of investment required to respond to future travel demand, which would require in-depth review and analysis in the next phase of regional transportation planning. Those mitigation measures include adding a second deck to the Golden Gate Bridge to provide transbay capacity for new bus and carpool lanes, or a light-rail line, either of which would extend between downtown San Francisco and Sonoma County. (*Mission Bay EIR*, Vol. II, pp. VI.E.31-34, 39, 41, 71-92, 94-125, 129-134, 214-215, and 225-226; *South of Market Plan EIR* pp. 98-105, and 111-124.)

### East Bay Corridor

There currently is virtually no room for additional vehicle traffic on the eastbound Bay Bridge approaches between 4:00 p.m. and 6:00 p.m. While the growth in travel demand on the Bay Bridge from the Downtown & Vicinity could be served by shifting those commuters from autos to transit and increased ridesharing, trips to or from other areas of the region generally are not well served by transit and would continue to be made primarily in private vehicles.

Even with the substantial shift to transit and ridesharing assumed in the analysis for travelers from the Downtown & Vicinity, the Bay Bridge would operate at capacity for about 4.5 hours in 2000, resulting in severe congestion on the San Francisco approaches to the bridge, travel speeds of less than 30 miles per hour, and heavy congestion on the bridge itself every weekday afternoon. Were the shift to transit and ridesharing from 1985 levels not to occur, the period of severe congestion in 2000 would extend for more than 5.5 hours.

By 2000, the numbers and proportion of commuters from the Downtown & Vicinity on BART during the p.m. peak period would be substantially higher. The number of trips on AC Transit would increase by about 65% based on the service available and the need to accommodate some riders that would otherwise use BART if ridership conditions were less crowded by 2000.

The ratio of passengers to seats on BART would increase from 1.30 in 1985 to 1.63 in 2000 (LOS F). AC Transit ridership would increase from 0.85 passengers per seat in

1985 to 1.30 in 2000 (LOS E). The capacity of BART is based on the maximum capacity of BART's computer system to track trains. The crowding projected for BART could not be fully mitigated during the peak period because of the system's technical operating limits.

An increase of seven percent in ridesharing from the Downtown & Vicinity across the Bay Bridge is projected for 2000. Even with substantial shifts to transit and ridesharing by commuters from the Downtown & Vicinity, by 2020 severe congestion on the Bay Bridge and its approaches would last for more than five hours. The number of regional vehicle trips which could not be served by the Bay Bridge during the p.m. peak period (4:00-6:00 p.m.) would grow from about 3,100 vehicles in 2000 to about 5,800 in 2020.

Mitigating those levels of congestion would require consideration of major changes to the regional transbay transportation system connecting the West Bay and East Bay. Virtually all of the concepts would require the City to work with MTC, Caltrans, and local government agencies to undertake the regional planning needed to expand transbay transportation capacity. (*Mission Bay EIR*, Vol. II, pp. VI.E.31-34, 37-41, 71-92, 94-124, 126-127, 129-133, 215-216, and 226-230; *South of Market EIR* pp. 98-105, and 111-124.)

#### Peninsula Corridor

Between 1985 and 2000, traffic would increase on U.S. 101 and Interstate 280, the freeways serving the Peninsula. However, there would be less congestion on those routes at the San Mateo County Line than on the Golden Gate and Bay Bridges. Both U.S. 101 and I-280 were only moderately congested at the San Mateo County line in 1985. In or near San Francisco, the capacity of local streets, U.S. 101, and I-280 would be sufficient to handle future travel demand; the switch from highway to transit modes by Downtown & Vicinity commuters assumed for the Golden Gate and Bay Bridges would not be required for the routes serving the Peninsula. The transit analysis for 2000 and 2020 in this regional corridor therefore uses the same amount of transit capacity as in 1985.

U.S. 101 at the San Mateo County line would operate at capacity for about three hours in 2000, with heavy congestion and speeds of 30 miles per hour occurring during that afternoon peak period. By 2020, heavy congestion on U.S. 101 would last for over



three afternoon hours. I-280 would operate with only moderate congestion at the county line in 2000 and 2020 with speeds averaging 35 to 45 miles per hour throughout the peak period. The congestion projected in 2020 would be reduced if commuters from the Downtown & Vicinity chose to increase their use of transit or ridesharing above the 1985 levels.

Transit ridership to the Peninsula would grow, although not to the extent that transit capacity would have to be increased above the 1985 levels. In 2000, the level of service on transit would remain high during the p.m. peak period (LOS B or C for all carriers), as there would be no system where ridership would be greater than available seats. Use of BART and SamTrans would grow by about 40% while CalTrain ridership would grow by just 5% (assuming the CalTrain station remains at Fourth and Townsend Streets). In 2020, CalTrain, BART and SamTrans would carry even larger loads, but would continue to operate below capacity (LOS B or C). (*Mission Bay EIR*, Vol. II, pp. VI.E.31-34, 37-38, 42-43, 61-62, 71-92, 94-124, 127-133, 216-217, and 230-231; *South of Market EIR* pp. 98-105, and 111-124.)

### Regional Highway Constraint Points

As a result of growth in regional travel demand, the following freeway segments lying beyond the screenlines in the transportation analysis could constrain San Francisco travel: the I-80/580/I-880 interchange in Oakland; the Caldecott Tunnel on State Route 24 I-80 in Alameda and Contra Costa Counties, U.S. 101 in Marin County, and U.S. 101 south of I-380 in San Mateo. (*Mission Bay EIR*, Vol. II, pp. VI.E.133-140.)

### Local Transit and Streets

#### MUNI

To analyze cumulative impacts on MUNI, individual MUNI routes were grouped on the basis of the location of their alignments and stops into the "Northeast," "Northwest," "Southwest," and "Southeast" areas of San Francisco, referred to as "screenlines." By 2000, ridership would generally be accommodated on the MUNI screenlines. Slight overcrowding (LOS E) would occur on the Northwest screenline during the p.m. peak hour, and on the Northeast screenline during the p.m. peak period. However, by 2020, all but the Southwest screenline would be operating beyond MUNI's load standard (an overall average of 1.25 passengers per seat).



Additional service required could include new light rail service to the Geary Boulevard corridor to the northwest, and to the Bayshore corridor in the southeast area of the City. (*Mission Bay EIR*, Vol. II, pp. VI.E.34-35, 93-99, 103-104, 114-124, 129-133, 217, and 231; *South of Market Plan EIR*, pp. 98-102, 112-117, C-19-21, and C-37.)

##### Local Streets

The *Mission Bay* and *South of Market EIRs* assumed the transportation network that existed before the Loma Prieta earthquake to be in place in the future. The following discussion is based on that assumption, modified to account for the fact that the Embarcadero Freeway is being demolished.

Severe congestion would continue to occur in both 2000 and 2020 on several of the James Lick (I-80) freeway approaches in the South of Market Area. Those streets and freeway ramps serve traffic destined for the Bay Bridge and Peninsula. Several of those streets are heavily congested now. The number of severely congested I-80 approach intersections would increase by 2000 and increase again by 2020, and this congestion would be worse than was projected by the *Mission Bay* and *South of Market EIRs* because the roadway that eventually replaces the Embarcadero Freeway would likely have less travel capacity than did the elevated freeway.

The First / Harrison Street, Fifth / Bryant Street, and Sixth / Brannan Street intersections presently operate at LOS F and would continue to do so in the future. Other intersections at or near freeway ramps, such as Fourth and Harrison, would likely deteriorate in the future. In particular, the queue for the Fourth / Harrison on-ramp has increased noticeably in the p.m. peak hour since the earthquake. Intersections near freeway ramps are often affected by freeway access queues, as cars waiting to enter the freeway back up to or through these intersections. This affects local traffic attempting to use streets in these areas. Some traffic will shift and use less congested routes in the future as this problem increases. Continued enforcement of the ordinance passed in 1987 prohibiting blocking an intersection should help to limit this problem.

By 2000, certain improvements to the local street network are planned to be in place, which would facilitate traffic circulation and access to I-280 by travelers from the Downtown & Vicinity. As a result of the I-280 Transfer Concept Program and Mission Bay Plan, King Street would be improved to function as a major roadway,

#### IV. Environmental Impacts

with new on- and off-ramps to I-280. With cumulative development, the new major intersections at Third / King Streets, and Fourth / King Streets are projected to operate at LOS D in year 2000, and LOS E and F in 2020, respectively. Mitigation measures to provide for more left-turn lanes and towaway lanes during commute periods would reduce congestion. (*Mission Bay EIR*, Vol. II, pp. VI.E., 140-148, 166-175, 200-201, and 218-219; *South of Market EIR*, pp. 105-106, and 124-126.)

It is expected that operating conditions on other local South of Market streets and intersections not serving freeway ramps (or near freeway-serving intersections) would continue to operate in a generally free flowing manner in the future, at least to 2000.

For the local street system to operate at the level described above, there would have to be a high level of public transit use in the Downtown & Vicinity. In 1985, about 55 percent of all afternoon peak-hour outbound trips from the Downtown & Vicinity were on public transit. That level of transit could grow to about 70 percent of all trips, based on the increased capacity of transit systems expected to be available by 2000, and the congestion levels estimated to occur in the future.

As described on p. 32, the Embarcadero Freeway has been demolished. Given this fact, the local street system serving The Embarcadero roadway will operate differently than the manner in which it served the Embarcadero Freeway. Generally, queues and delays at intersections will be lengthened along the street corridors leading to remaining Bay Bridge ramps during the afternoon commute. Also, an increase in average delays on the Bay Bridge would be expected during the morning commute period. Any proposal for the construction of a new roadway along The Embarcadero will be subject to separate environmental review.

#### PROJECT IMPACTS

##### Travel Demand

The proposed project consists of 118,500 sq. ft. of discount retail of a type which sometimes is referred to as "membership wholesale" or "big box retail." At the time that the following transportation analysis was performed, the retail component of the project contained 120,000 sq. ft. of retail space. This difference in retail area (about one percent) would not affect the basic conclusions of the following analysis; if anything the analysis would slightly overstate project impacts. Costco maintains



detailed records of register transactions by time of day and day of week for each store during the pre-Christmas peak and of monthly variations in sales that were used in the estimation of trip generation. Trip generation rates for the proposed residential component (60 to 80 dwelling units) were obtained from the Institute of Transportation Engineers (ITE), *Trip Generation*.<sup>/2/</sup>

Table 3 on p. 64 presents a summary of weekday p.m. peak-hour and Saturday peak-hour traffic based on cash register activity at Costco's eight San Francisco Region stores during the pre-Christmas peak in 1988. Costco surveys indicate that there is a virtual one-to-one ratio between vehicles visiting Costco and cash register transactions, and actual counts and observations conducted in 1987-89 tend to support this finding.<sup>/3/</sup> It was assumed that each cash register transaction equalled one inbound and one outbound trip. It was further assumed that a San Francisco-based Costco store would attract customers at a rate above the Bay Area Region average, due to higher population density. In order to present a worst-case scenario for the proposed San Francisco store, the Santa Rosa Costco trip generation data (the region's highest) was used to calculate potential vehicle trip generation for an average and peak month. According to this data, trips generated by the Santa Rosa store averaged 5.97 one-way trips per thousand square feet during the peak hour of existing 1989-90 traffic in the peak month of activity (December). Based on data on monthly sales variation, 4.52 trips per thousand square feet are estimated to occur during the peak hour in an average month. Similar data collected on Saturdays indicate that Saturday peak-hour trip generation is 9.50 trips per thousand square feet in the peak month of the year, and 7.20 trips per thousand square feet during the peak hour in an average month.

Table 4 on p. 65 shows the vehicle trip generation potential for the proposed Costco store for an average and peak month. During an average month, trip generation for the proposed 120,000 sq. ft. Costco store is estimated to be about 5,840 weekday trips, of which about 540 trips would occur during the p.m. peak hour of background traffic, and about 6,640 Saturday trips, of which about 860 would occur during the midday peak hour. For the peak month, weekday trip generation is estimated to be about 7,800 trips, of which about 720 trips would occur during the p.m. peak hour of background traffic, and Saturday trip generation is projected to be about 8,800 trips, of which about 1,140 would occur during the midday peak hour.



TABLE 3: ESTIMATED COSTCO TRIP GENERATION BASED ON REGISTER TRANSACTIONS: EXISTING SAN FRANCISCO REGION STORES

Store	Size (GSF)	WEEKDAY PM PEAK HOUR (4:30 - 5:30)			Peak Month (December)/a/			Low Month (January)/a/			Average Month (June)/a/		
		Peak Month		OB/b/	IB Trips Per KSF	OB Trips Per KSF	Total Trips Per KSF/b/	IB Trips Per KSF	OB Trips Per KSF	Total Trips Per KSF/b/	IB Trips Per KSF	OB Trips Per KSF	Total Trips Per KSF/b/
		IB/b/	OB/b/										
Santa Clara	123,304	221	229		1.79	1.86	3.65	1.10	1.14	2.24	1.36	1.41	2.77
Richmond	111,696	200	211		1.79	1.89	3.68	1.10	1.16	2.26	1.36	1.43	2.79
San Leandro	106,447	179	188		1.68	1.77	3.45	1.03	1.08	2.12	1.27	1.34	2.61
Martinez	120,940	316	324		2.61	2.68	5.29	1.60	1.64	3.25	1.98	2.03	4.01
Santa Rosa/c/	110,130	309	348		2.81	3.16	5.97	1.72	1.94	3.66	2.13	2.40	4.52
San Jose	106,274	226	231		2.13	2.17	4.30	1.31	1.33	2.64	1.61	1.65	3.26
San Bruno	106,854	191	226		1.79	2.12	3.90	1.10	1.30	2.40	1.35	1.60	2.96
Fremont	127,354	217	221		1.70	1.74	3.44	1.05	1.07	2.11	1.29	1.32	2.61
REGION AVG.	114,125	237	243		2.08	2.13	4.21	1.28	1.31	2.58	1.57	1.61	3.19
SATURDAY PEAK HOUR (2:00 - 3:00)													
Santa Clara	123,304	405	413		3.28	3.35	6.63	2.02	2.06	4.07	2.49	2.54	5.03
Richmond	111,696	355	375		3.18	3.36	6.54	1.95	2.06	4.01	2.41	2.54	4.95
San Leandro	106,447	339	324		3.18	3.04	6.23	1.96	1.87	3.82	2.41	2.31	4.72
Martinez	120,940	542	551		4.48	4.56	9.04	2.75	2.80	5.55	3.40	3.45	6.85
Santa Rosa/c/	110,130	535	511		4.86	4.64	9.50	2.98	2.85	5.83	3.68	3.52	7.20
San Jose	106,274	434	421		4.08	3.96	8.05	2.51	2.43	4.94	3.10	3.00	6.10
San Bruno	106,854	372	347		3.48	3.25	6.73	2.14	1.99	4.13	2.64	2.46	5.10
Fremont	127,354	433	408		3.40	3.20	6.60	2.09	1.97	4.05	2.58	2.43	5.01
REGION AVG.	114,125	420	411		3.68	3.60	7.28	2.26	2.21	4.47	2.79	2.73	5.52

/a/ Based on 1989 Costco sales figures.

/b/ IB = Inbound; OB = Outbound; KSF = 1,000 square feet

/c/ Trip rates per 1,000 square feet of floor area at Santa Rosa Costco was used in analysis of proposed project. See discussion on p. 63 for explanation.

SOURCE: Wilbur Smith Associates, based on statistics supplied by Costco

TABLE 4: PROJECT TRIP GENERATION: RATES AND TOTALS

AVERAGE MONTH	Land Use	Size	Trip Generation Rates /a/						Trips Generated					
			Daily			Weekday PM Peak			Saturday			Weekday PM Peak		
			Weekday	Saturday		In	Out	Total	In	Out	Total	In	Out	Total
Costco Store/b/	120,000 sq.ft.	48.7	55.3			2.13	2.40	4.52	3.68	3.52	7.20	256	288	544
Residential/c/	80 units	10	10			0.63	0.37	1.0	0.53	0.47	1.0	50	30	80
	TOTAL											306	318	624
			6,644	7,436					442	422	864	484	460	944
PEAK MONTH	Costco Store/b/	120,000 sq.ft.	65.0	73.3		2.81	3.16	5.97	4.86	4.64	9.50	337	379	716
	Residential/c/	80 units	10	10		0.63	0.37	1.0	0.53	0.47	1.0	50	30	80
	TOTAL											387	409	796
			8,600	9,596					583	557	1,140	625	595	1,220

/a/ Trip generation rates are per 1,000 square feet for Costco Store and per unit for residential use.

/b/ Worst-case scenario based on historic traffic counts and activity data for the existing Santa Rosa Costco store.

/c/ Residential rates from Institute of Transportation Engineers, Trip Generation, Fourth Edition, 1987.

SOURCE: Wilbur Smith Associates and San Francisco Department of City Planning

The person-trip generation rate for the residential component during the weekday is based on an average of ten trips per dwelling unit, with the p.m. peak hour accounting for ten percent of the daily rate (i.e., one trip per dwelling unit). Traffic directional distribution is estimated to be 63% inbound and 37% outbound during the p.m. peak hour. The peak-hour trip rate on a Saturday is approximately the same as for the weekday rate with a directional split of 53% inbound and 47% outbound. Traffic directional distributions are based on ITE data./2/

The residential component of the project would produce up to an estimated 800 weekday person trips, with 80 occurring during the p.m. peak hour. Based on 1980 Census Tract journey-to-work data for the project area, it was estimated that a total of about 20 of the 80 peak-hour trips for both the weekday and Saturday periods would be made by automobile. Combined project-generated vehicle trips would total up to about 560 during the weekday p.m. peak hour and about 884 during the Saturday peak hour for an average month, and about 740 during the weekday p.m. peak hour and about 1,160 during the Saturday peak hour for a peak month.

For purposes of analyzing traffic impacts from the project, it was assumed that all Costco customers would arrive by automobile, as would be expected for a "big box retail" store. It is expected that most trips to this Costco Store would originate in San Francisco, as several other Costco Stores exist in the Bay Area. Trips were assigned to various locations of the city based on existing residential patterns and current traffic volumes. It was assumed that 30% of the trips would use U.S. 101 South, 30% would originate north of Market Street, and the remaining 40% would originate in the western part of San Francisco.

A modal split and distribution was developed for vehicle trips generated by the residential component of the project based on work location data from the 1980 Census. The Census data indicated that 22% of the trips would have the central business district as a point of origin/destination, and an additional 60% would be San Francisco based. Trips were assigned to the five intersections analyzed in the vicinity of the site, based on the locations of the parking lot access, the one-way street system and the assumed origins/destinations. As shown in Figure 2, p. 17, access to the parking lot would be provided from Bryant, Tenth, and Eleventh Streets with access to the residential complex located on Harrison Street. The Tenth Street access location would be restricted to vehicles entering the parking garage; vehicles would not be allowed to exit onto Tenth Street from this access location.



### Transit

There are five MUNI routes with stops within one block of the project site. MUNI Metro and BART service in the Market Street subway are accessible via the Van Ness Avenue station (four blocks north of the site). Figure 10 shows current transit routes in the project area. Additional MUNI service has been proposed as part of the Mission Bay project which, if implemented, would include re-routing of the 47-Van Ness line along Eleventh Street adjacent to the project site.

The project would produce a minimal increase in transit ridership. It is estimated that approximately 35% of the Costco employees (representing approximately 50 round trips daily) would use public transit, and virtually none of the customers would use transit. Arrival and departure times of employees would be dispersed over a two- to three hour time period, as would origins and destinations. The proposed residential complex of 80 dwelling units would generate approximately 30 transit trips during the p.m. peak hour. Based on 1980 Census data, it was determined that over 80% of the peak-hour transit trips would be made within the City of San Francisco.

As the project would have vehicular access to and/or from Bryant, Tenth, Eleventh and Harrison Streets, and transit routes operate on each of these streets, there could be some potential for additional vehicular conflicts with transit vehicles.

### Traffic

#### Local Intersection Traffic

Impacts of the project were assessed for five local intersections in the vicinity of the site. A discussion of the methodology used in the analysis of the study intersections appears in Appendix B, pp. A.33-43. Currently, all of these intersections operate satisfactorily (LOS D or better) during the p.m. peak hour. As shown in Table 5 on p. 69, project-generated traffic would affect the LOS at two of the intersections during an average month and at three intersections during the peak month. Intersection operations at Eleventh / Harrison Streets would degrade from LOS C to LOS D during an average month, and to LOS E during the peak month. LOS E represents capacity and is not within the acceptable LOS range. Intersection operations at Tenth / Harrison Streets would be affected by project-generated traffic, but would remain in the acceptable LOS range. The LOS at the two remaining intersections would not be affected by project-generated traffic.



SOURCE: Wilbur Smith Associates

Costco Wholesale

**Figure 10**  
Transit Routes and  
Stops in the Project Area



TABLE 5: WEEKDAY PM PEAK HOUR INTERSECTION LEVEL OF SERVICE (LOS)

Intersection	Existing/a/ V/C* LOS		Existing Plus Project (Average (Peak Month) Month) V/C* LOS V/C* LOS				Year 2000 V/C* LOS		Project Percent/b/ (Average Month)
			V/C*	LOS	V/C*	LOS	V/C*	LOS	
11th/Harrison	0.77	C	0.89	D	0.99	E	1.02	F	48%
11th/Bryant/Division	0.75	C	0.79	C	0.80	C/D	0.87	D	26%
10th/Harrison	0.66	B	0.70	B/C	0.72	C	0.76	C	84%
9th/Bryant	0.52	A	0.58	A	0.59	A	0.63	B	67%
Intersection Serving Freeway On-Ramp	S/V*	LOS	S/V*	LOS	S/V*	LOS	S/V*	LOS	
10th/Bryant	19.5	C	21.4	C	23.4	C	43.5	E	48%

\* V/C = Volume to Capacity Ratio; S/V = Seconds of Delay per Vehicle

/a/ Existing LOS based on counts conducted in November and December, 1989, and January and July, 1990.

/b/ Project percent is the percentage of Year 2000 traffic growth that would be generated by the Project.

SOURCE: Wilbur Smith Associates

Table 6 on p. 70 shows existing and projected LOS for the Saturday peak hour. As shown, none of the intersections would be affected by project-generated traffic with the exception of Eleventh / Harrison Streets which would operate at LOS A/B during the peak month.

Cumulative traffic growth in the area will result from development occurring in the downtown area, the Civic Center area, and the South of Market area. The localized aspects of cumulative development on streets and intersections were analyzed using underlying growth factors. It is estimated through this method that traffic at intersections in the vicinity of the project site will increase by ten percent by the Year 2000 without the project. Tables 5 and 6 on pp. 69-70 show the effects of Year 2000 conditions at the intersections analyzed in the vicinity of the proposed project for the p.m. peak hour and the Saturday peak hour. Existing volumes have been increased by



TABLE 6: SATURDAY PEAK HOUR INTERSECTION LEVEL OF SERVICE (LOS)

Intersection	Existing/a/		Existing Plus Project				Year 2000		Project Percent/b/ (Average Month)
	V/C*	LOS	(Average Month) V/C*	LOS	(Peak Month) V/C*	LOS	V/C*	LOS	
11th/Harrison	0.40	A	0.57	A	0.61	A/B	0.61	A/B	75%
11th/Bryant/Division	0.52	A	0.56	A	0.57	A	0.61	A/B	34%
10th/Harrison	0.43	A	0.52	A	0.55	A	0.56	A	57%
9th/Bryant	0.37	A	0.43	A	0.45	A	0.46	A	59%
Intersection Serving Freeway On-Ramp	S/V*	LOS	S/V*	LOS	S/V*	LOS	S/V*	LOS	
10th/Bryant	6.8	B	8.7	B	10.2	B	11.7	B	57%

\* V/C = Volume to Capacity Ratio; S/V = Seconds of Delay per Vehicle

/a/ Existing LOS based on counts conducted in November and December, 1989, and January and July, 1990.

/b/ Project percent is the percentage of Year 2000 traffic growth that would be generated by the Project.

SOURCE: Wilbur Smith Associates

ten percent at all intersections to reflect background growth. In addition, project-generated traffic for an average month has been added to the background growth to determine Year 2000 conditions if the project were approved.

These tables also show the project percent of the increase in traffic volumes at the intersections analyzed. In the Year 2000 during the p.m. peak hour, the intersection of Eleventh / Harrison Streets would operate at LOS F. LOS F represents a jammed condition in which traffic demand exceeds capacity and is unacceptable. The intersections of Eleventh Street / Bryant Street / Division Street would operate at LOS D, and the remaining two intersections would operate at LOS C or better. Year 2000 Saturday peak-hour conditions would continue to be at LOS B or better for all intersections.

### Freeway On-Ramp Analysis

Traffic operations at Tenth Street / Bryant Street, serving the freeway on-ramp nearest the project site, are shown in Tables 5 and 6 on pp. 69-70. This intersection currently operates at LOS C and B, on weekdays and Saturdays, respectively./3,4/ The addition of project traffic would not affect the service levels during an average month or the peak month. Year 2000 conditions would be at LOS E during the p.m. peak hour. Year 2000 Saturday peak-hour conditions would continue to be LOS B.

### Freeway Corridor Analysis

The project would contribute to increases in traffic on the major freeways serving downtown San Francisco. Traffic generated by the project would increase total traffic on major freeways during the p.m. peak period and the p.m. peak hour by less than 0.5%. Such increases would not be measurable against the day-to-day fluctuations in traffic volumes.

### Pedestrian Movements

Pedestrian volumes in the area surrounding the site are relatively light. The project would not result in a large number of pedestrian trips as most trips are expected to be in automobiles. It is estimated that just over 20% of the 80 weekday p.m. peak-hour trips generated by the residential units would be walking trips.

## OFF-STREET PARKING AND LOADING REQUIREMENTS AND DEMAND

### Parking

Parking demand was projected for the Costco Store project on the basis of the estimated vehicle traffic generated by the project. Table 7 presents a summary of projected peak parking demand for the proposed Costco Store. The estimate for customer parking demand was made on the basis of the same historic Costco transaction data utilized for development of traffic generation rates. It represents peak-hour parking demand associated with Costco store activities occurring at approximately 12:00 noon to 1:00 p.m. rather than the peak hour of non-project traffic, which occurs at 4:30 p.m. to 5:30 p.m. during the weekday commute. It was assumed that all customers would arrive by car, as would be expected for a "big box retail"

TABLE 7: ESTIMATED PARKING SURPLUS / DEFICIT

Period	Peak Parking Demand	PROJECT: 720 Parking Spaces		INCREASED PARKING OPTION: 890 Parking Spaces	
		Effective Supply/a/	Surplus/ (Deficit)	Effective Supply/a/	Surplus/ (Deficit)
Average Month Weekday	510	650	140	800	290
Average Month Saturday	625	650	25	800	175
Peak Month Weekday	645	650	5	800	155
Peak Month Saturday	790	650	(140)	800	10

/a/ Effective supply represents actual parking supply multiplied by an efficiency factor of 90%.

SOURCE: Wilbur Smith Associates, based on statistics supplied by Costco Wholesale Corporation.



store. This assumption is somewhat conservative, since there may be a relatively small amount of transit access to the store by customers.

According to information received from Costco, the typical Costco store employs approximately 150 employees. Although some shift staggering is expected to occur, virtually all employees would be on-site during the store's mid-day peak activity period. An additional 25 seasonal employees would be hired during the pre-Christmas peak. Mode split characteristics for employees were based on City guidelines for South of Market employees./4/ It was assumed that 47% of employees would drive alone to work, 16.3% would carpool (with half of this number requiring parking on-site) and 1.1% would vanpool, with one-fourth of this number parking on site. Combining these figures, it was estimated that approximately 55% of employees would require parking on-site.

- The proposed project would include a total of 720 parking spaces in a three-level parking structure on the site. The parking structure would be designed so that a fourth level of parking could be added at a later date (unspecified at this time), so that there could be a total of approximately 890 parking spaces within applicable height and bulk limits of the site. Parking demand and the surplus/deficit under four conditions (average month weekday, average month Saturday, peak month weekday, and peak month Saturday) for the project (provision of 720 parking spaces) and for the potential increased parking option (provision of 890 parking spaces) are shown in Table 7. An efficiency factor of 90% has been applied to the number of parking spaces provided with the project under both scenarios. In the analysis of parking conditions in relatively high-volume garages, the parking supply is often discounted by a five to ten percent efficiency factor to account for practical impediments to full utilization of a high-volume, high-turnover parking facility. This is particularly true for retail parking with high turnover, and for relatively large facilities where empty spaces on the upper floors are difficult to access. The application of this efficiency factor yields an effective parking supply of about 650 parking spaces for a 720-space project and about 800 effective spaces for the increased parking option with 890 spaces.
- As shown in Table 7, for the proposed project, based on an effective parking supply of about 650 parking spaces, there would be an estimated 140 space surplus for an average month weekday, a surplus of about 25 spaces for an average month Saturday,

a surplus of about 5 spaces for a peak month weekday, and a deficit of about 140 spaces for a peak month Saturday. For the increased parking option, based on an effective supply of about 800 spaces, there would be an estimated 290 space surplus under average month weekday conditions, a surplus of about 175 spaces under average month Saturday conditions, a surplus of about 155 spaces under peak month weekday conditions, and a surplus of about 10 spaces under peak month Saturday conditions. For the proposed project, parking demand would exceed on-site supply during peak month Saturday conditions; for the increased parking option parking demand would not exceed supply under any of the four analyzed conditions.

During weekend and holiday periods, on-street parking in the area of the project is estimated at 55% occupied indicating that an estimated 825 on-street spaces are available in the study area. For the proposed project (provision of 720 spaces), a deficit of about 80 parking spaces could be accommodated within one block of the project site, should shoppers choose to park on-street. Further parking deficit would likely cause some Costco patrons to park up to two blocks from the site, wait within the parking lot for spaces to become available, or queue on Tenth and Eleventh Streets to enter the parking lot. This condition would prevail for weekends between Thanksgiving and New Year's as well as for other relatively heavy shopping weekends scattered throughout the year, and could contribute to short-term, temporary reductions in area intersection LOS. The above-described parking deficit for the proposed project (provision of 720 spaces) and resultant off-site queuing and traffic disruption would not constitute a significant environmental impact, due the limited times of year when parking demand would exceed on-site supply.



The residential component of the project would provide one off-street parking space per dwelling unit as required by the City of San Francisco. Based on surveys of automobile ownership at condominium developments in San Francisco, the one parking space per unit rate would be adequate to meet demand from residents of the project's housing component. The Department of City Planning is in the process of conducting a survey of parking demand specific to affordable housing projects; the results of that survey are not yet available. Additional parking demand would be generated by visitors to the residential portion of the project. This demand would be highest in the evening hours when on-street parking would be available in the project vicinity.

Project area parking usage surveys were conducted on Saturday, December 2 and Wednesday, December 6, 1989 from noon to 5:00 p.m. These surveys included an inventory and hourly parking accumulation studies at all on-street facilities within a two-block radius from the site and at the existing parking lot on the site. There were no public off-street parking facilities located within the study area, other than the 130-space lot located on the project site, at the time of the parking survey.

Appendix B, pp. A.33-43, contains a summary of these surveys.

Drivers using the existing 130 parking spaces provided in the public lot on the site would be displaced by the project. This lot was observed to be less than 50% occupied on both the weekday and Saturday survey days, thus only about 65 cars would be affected. These displaced drivers would have to compete with other drivers for on-street parking or other public parking in the area. As indicated in Chapter III, Environmental Setting, pp. 31-34, on-street parking facilities are operating at effective capacity (more than 90% occupied) during the weekday midday peak period, and there are not many off-street parking lots in the project vicinity. The impact of the displaced parkers would be an increased shortage of parking spaces in the area.

According to Section 151 of the *City Planning Code*, the Costco portion of the project would be required to provide a total of 434 parking spaces and may provide 150% of the requirement (a total of 651 spaces) as an accessory use. Retail-serving parking in



● excess of 651 spaces (434 required spaces and 217 accessory spaces) could be provided as a principal permitted use if available for use by the operators, employees, clients, and/or visitors of a permitted, or approved conditional, non-residential use in the vicinity, per Section 817.28 of the *City Planning Code*. The residential portion of the project would be required to provide one space per unit.

### Loading

Under Section 152 of the *City Planning Code*, the project would be required to provide five off-street freight loading docks with a minimum width of 12 feet and minimum length of 35 feet. The project would provide five freight loading spaces in an area about 60 feet wide and 60 feet deep, (see Figure 2, p. 17). This would be adequate to meet both the demand of large trucks and vans and the Code requirement for the number of loading docks. The freight loading area would satisfy the minimum dimensions specified in the Code (Section 154(b)) for that number of loading spaces.

Project truck loading docks would be accessed from a shared parking and loading entrance along Eleventh Street. Costco has indicated that deliveries would occur between 5:00 a.m. and 11:00 a.m. This would include deliveries by Costco trucks as well as deliveries by local area vendors and subcontractors.<sup>/5/</sup> This time period would overlap with morning peak period (5:30 a.m. to 9:00 a.m.) activity at the Veterans Cab Company located across from the site on Eleventh Street. At present, 83 cabs are operated from the Eleventh Street location.<sup>/6/</sup> The potential for conflict between Costco delivery trucks and cabs on Eleventh Street would be relatively minimal because both the truck loading docks and truck maneuvering space would be located completely on-site. The delivery period would also overlap with store hours (opening time would be 10:00 a.m.). Conflicts at the shared parking and loading entrance would occur. This impact would not be significant because there would be three other parking entrances available to customers. The number of Costco delivery trips is estimated at 20 per day. Of these 20 daily trips, approximately six or seven would be trailer trucks. The trailer trucks would range in size from 20 to 40 feet in length. Approximately 50 percent of daily delivery trips would originate in San Leandro. The remaining trips would originate throughout San Francisco, involving primarily local area vendors and subcontractors. It is anticipated that delivery trucks from San Leandro would use the Harrison Street / Eighth Street I-80 off-ramp and the Bryant Street / Fifth Street I-80 on-ramp for primary access to and from the project site.<sup>/7/</sup> Delivery trucks returning to San Leandro might also use the Bryant Street / Eighth Street on-ramp.

Traffic impacts to local I-80 ramps from Costco delivery trucks would be relatively minimal. As stated above, about ten delivery trips (from San Leandro) are expected to use the freeway ramps between 5:00 a.m. and 11:00 a.m. The effect on traffic flow from this level of truck volume spread over the delivery hours would be relatively minimal.

#### DEMOLITION, EXCAVATION, AND CONSTRUCTION TRAFFIC/8/

During the projected 12-month construction period, transportation impacts would result from truck movements to and from the site during demolition, excavation, and building construction activities. Demolition and excavation would require approximately six weeks and would generate an average of 12 to 18 truck round trips per day in and out of the project site between 9:00 a.m. and 3:30 p.m. The maximum number of truck round trips during the first six weeks of construction is estimated to be 20 per day. Steel erection and exterior masonry work would generate an average of five truck round trips per day. Concrete pours would generate up to 30 round trips per day. The maximum number of truck round trips during other phases is estimated to be between 25 and 30 per day. It is anticipated that excavation spoils would be hauled to a disposal site south on the Peninsula. The disposition of contaminated soils would likely be to a Class I or II disposal site in Bakersfield. Trucks would be expected to use Harrison Street and other surface streets to the south.

Primary construction truck access to the proposed site would be from Harrison Street and Bryant Street with secondary access from Ninth Street and Tenth Street. It is anticipated that project construction trucks would use the U.S. 101 / Bryant Street ramps for primary freeway access. During the construction period, the sidewalks fronting the project site on Harrison, Bryant, Tenth and Eleventh Streets would be closed, with the parking lanes on Tenth, Eleventh and Bryant Streets also closed to provide pedestrian walkways. Closure of the parking lanes would displace approximately 60 unmetered one- and two-hour parking spaces. Lane and sidewalk closures are subject to review and approval by the Department of Public Works.

During the construction period, the MUNI bus stop located at Eleventh Street near Bryant Street would be displaced. This stop services the 9-San Bruno inbound bus and would have to be moved during construction. The stop would be restored to the present location once the project is completed. Bus stop relocations are subject to review and approval by MUNI.



Materials storage is proposed to be on-site, and would therefore not generate construction vehicle trips to the site. Parking for construction workers' vehicles would occur on-site, and would therefore not affect project area parking conditions. Impacts on local intersections from construction worker traffic would occur in proportion to the number of construction workers who would use automobiles. The maximum number of construction workers on-site at any one time is estimated to be approximately 80 people.

The impact of construction truck traffic would be a lessening of the capacities of access streets and haul routes because of the slower movements and larger turning radii of construction trucks compared to passenger vehicles. Lane blockage on Tenth, Eleventh, Harrison and Bryant Streets by queued trucks, if it were to occur, would reduce the capacity of these streets. The following MUNI lines could be affected: 9-San Bruno, 27-Bryant and 42-Downtown Loop. SamTrans buses on Tenth Street would also be affected.

Blockage during times of peak traffic flow would have greater potential to create conflicts than during non-peak hours because of the greater peak-hour numbers of vehicles in adjacent lanes and vehicles (autos and buses) that would have to maneuver around the queued trucks. Any truck traffic from 7:00 a.m. to 9:00 a.m. or from 4:00 p.m. to 6:00 p.m. would coincide with peak-hour traffic, and would serve to worsen service levels. As noted above, truck traffic would be restricted to the hours of 9:00 a.m. to 3:30 p.m. which would avoid such peak-period effects.

### NOTES - Transportation

- /1/ This general information is based on impact analysis carried out in the *I-280 Transfer Concept EIR*, 84.385E, May 23, 1985, which examined different surface route alternatives along The Embarcadero right-of-way. Any new roadway designs proposed for The Embarcadero would be subject to additional, separate environmental review.
- /2/ Institute of Transportation Engineers, *Trip Generation*, Fourth Edition, 1987.
- /3/ Counts and observations by Wilbur Smith Associates, 1987, 1988 and 1989.
- /4/ San Francisco Department of City Planning, *Guidelines for Environmental Impact Review: Transportation Impacts*, September 1983, p. 19.
- /5/ Ali Moayeri, Construction Manager, Costco Wholesale Corporation, telephone conversation, September 30, 1991.



- /6/ Mary Ann Pont, Operations Manager, Veterans Cab Company, telephone conversation, July 17, 1990.
- /7/ Thomas Walker, Vice President of Construction, Costco Wholesale, telephone conversation, January 22, 1991.
- /8/ Cal Roberts, Roberts Managing Contractors, Inc., telephone conversation, January 22, 1991.

#### **D. AIR QUALITY**

##### **CUMULATIVE CONTEXT**

The *Mission Bay* and *South of Market Plan EIRs* analyzed cumulative effects of development in the Downtown & Vicinity on regional air quality in the future. This material is incorporated by reference and summarized here. The analyses in those EIRs describe the continued failure of the Bay Area to attain federal ozone and carbon monoxide standards, a problem to which the project would contribute. (For more detail on air pollutant emissions and their impacts, see *Mission Bay EIR*, Vol. II, pp. VI.F.13-18.)

Motor vehicle exhaust emissions would continue to be the primary source of air pollutants in the Downtown & Vicinity. These emissions would affect local and regional air quality. Ozone and carbon monoxide concentrations occasionally violate air quality standards at some locations in the Bay Area. Emissions of hydrocarbons and nitrogen dioxide, precursors of ozone, would contribute to regional ozone concentrations. Emissions would also add to carbon monoxide concentrations at congested intersections.

Computer modeling of cumulative carbon monoxide concentrations at eight congested intersections analyzed in the *Mission Bay EIR* (five of which are intersections adjacent to freeway ramps) suggests that prior to the Loma Prieta earthquake, state and federal standards for eight-hour average concentrations (9 parts per million [ppm]) were violated on occasion at the intersection of Sixth and Brannan Streets (13.4 ppm) and at the intersection of Third and Berry Streets (9.2 ppm). With the temporary closure of I-280 for repairs, these two intersections are not currently congested; both the normal traffic and the resulting air quality effects have been dispersed to other intersections. When I-280 is re-opened, traffic at the study intersections is expected to return to pre-quake levels, resulting in air quality similar to pre-quake conditions. None of the eight intersections violate state or federal one-hour standards (20 ppm and 35 ppm,

respectively). Carbon monoxide concentrations are expected to improve throughout the region due primarily to better vehicle emission controls. Carbon monoxide concentrations at the eight intersections, even with Mission Bay and cumulative growth in traffic, are projected to decrease. No violations of state or federal carbon monoxide standards are expected at those intersections in 2000 (or at buildout of Mission Bay in 2020). (For more detail on intersection carbon monoxide concentrations in the South of Market area, see *Mission Bay EIR*, Volume II, pp. VI.F.9-10 and 17-18, and Table VI.F.4, p. VI.F.19; *South of Market EIR* pp. 140-142 and Table 10, p. 143.)

The *1982 Bay Area Air Quality Plan (1982 Plan)* established schedules and strategies to comply with federal ozone and carbon monoxide standards established under the Clean Air Act by December 31, 1987. The deadline has now passed, and the Bay Area remains a non-attainment area for ozone and carbon monoxide (standards are occasionally violated). The U.S. Environmental Protection Agency (EPA) has required that the *1982 Plan* be updated by 1991.

Effective January 1, 1989, the California Clean Air Act provides for the designation of districts into three classes: moderate (defined as an area which can attain state and federal air quality standards by December 31, 1994), serious (areas which can attain the standards by December 31, 1997), and severe (areas that cannot specify an attainment date). In each case, the Act specifies strategies that must be adopted. In all cases, plans are required to demonstrate a five percent per year reduction in the emissions of pollutants or precursors, unless the California Air Resources Board (ARB) determines that all feasible measures are being employed. The Bay Air Basin has been designated as severe, due to its inability to attain state standards by 1997./1/

#### PROJECT EFFECTS

Upon completion, the project would affect localized air quality in two ways. Emissions would be generated by project-related traffic, and by combustion of natural gas for building space and water heating. Transportation sources would account for over 90% of project-related emissions.

Curbside CO concentrations at selected intersections that would be affected by project-generated traffic and by cumulative development traffic were projected for conservative conditions and are compared with ambient standards in Table 8.



TABLE 8: EXISTING AND PROJECTED CURBSIDE CARBON MONOXIDE CONCENTRATIONS AT SELECTED INTERSECTIONS/a/

Intersection	Averaging Time	Concentrations (ppm)	
		1990	2000/b/
Eleventh and Harrison	1-hour	9.3	8.3
	8-hour	6.5	5.8
Tenth and Bryant	1-hour	9.5	8.7
	8-hour	6.6	6.1
Tenth and Harrison	1-hour	10.0	8.5
	8-hour	7.0	6.0
Ninth and Bryant	1-hour	9.7	8.3
	8-hour	6.8	5.8

/a/ Calculations for all scenarios were made using a revised version of the Modified Linear Rollback (MLR) method described in the *Downtown Plan EIR*, EE81.3, certified October 18, 1984, Appendix O. Background concentrations were calculated to be 5.8 ppm for eight hours in 1990, and 5.0 ppm for eight hours in 2000. Any underlined values would be in violation of the state or federal CO standards. The one-hour State standard is 20 ppm, the one-hour federal standard is 35 ppm, and the eight-hour State and federal standards are 9 ppm. Emission rates were derived from the California Air Resources Board EMFAC7D computer model, from the BAAQMD's Guidelines, revised April 1988.

/b/ Based on rate of traffic growth derived from forecasts in the *Mission Bay EIR*. The project would be contained within this forecast.

SOURCE: Environmental Science Associates, Inc.

Currently (1990), the eight-hour CO concentrations at the four selected intersections are not estimated to violate air quality standards. CO concentrations are predicted to be less in 2000 than in 1990 and would not violate the standards at these intersections in this future scenario. Carbon monoxide levels are expected to be lower in the future due to emission controls on new vehicles, which would offset increases in traffic volumes and congestion.

Table 9 shows projected daily emissions of pollutants in the year 2000 from project-generated traffic, and compares them with San Francisco County transportation-related emissions (Year 2000) and total transportation-related emissions



TABLE 9: PROJECTED DAILY TRANSPORTATION-RELATED POLLUTANT EMISSIONS

Pollutant	Emissions (tons per day)/a/		
	Project 2000/a,b/	SF County 2000/c/	Bay Area 2000/c/
Hydrocarbons	0.01	14	160
Nitrogen Oxides	0.03	22	270
Carbon Monoxide	0.37	120	1,400
PM <sub>10</sub>	0.05	28	310
Sulfur Oxides/d/	0.01	28	83

/a/ Project emissions were calculated using BAAQMD EMFAC7D vehicle emission factors. Emissions of HC, NO<sub>x</sub>, and CO include an assumed six minutes of idling time per vehicle trip. Emissions of particulates include dust disturbed from roadway surfaces.

/b/ Based upon a weighted daily average of 21,819 vehicle-miles traveled.

/c/ San Francisco County and Bay Area emissions correspond only to transportation-related emissions based on BAAQMD Emissions Inventory Summary Report (August 1987), and year 2000 emissions inventory for the Bay Area provided by Tirlochan Mangat, Manager, Special Projects Section, BAAQMD.

/d/ Sulfur oxides and sulfur dioxides are assumed to be interchangeable.

SOURCE: Environmental Science Associates, Inc.

in the Bay Area. The project would contribute less than 0.1% to the transportation-related emissions inventory for San Francisco in 2000, which is below the one percent threshold established by the BAAQMD defining a potentially significant impact on air quality.

Emissions of particulates resulting from construction and from vehicle trips generated by the project and cumulative development would increase particulate concentrations, which could increase the frequency of particulate standard violations in San Francisco, with concomitant health effects./2/

CO concentrations in the area may also be affected by CO generated by vehicular traffic along U.S. 101, which is located approximately 400 feet southwest of the proposed residential units. CO concentrations were modeled near the proposed residential area with the CALINE-4 dispersion model developed by the California

#### IV. Environmental Impacts

Department of Transportation using existing and projected Year 2000 traffic volumes along U.S. 101./3/ Maximum one-hour and eight-hour roadside CO concentrations at the intersection of Eleventh and Harrison Streets (near the proposed housing) were projected using peak-hour traffic volumes at that intersection (consisting of project plus cumulative trip increases) and worst-case meteorological assumptions./4/ The carbon monoxide contribution of traffic on U.S. 101 on CO concentrations at the Eleventh / Harrison Streets intersection (the intersection at the proposed residential units closest to U.S. 101) was the same under existing and Year 2000 conditions. This would occur because U.S. 101 is currently operating at capacity conditions during the peak hour, and traffic volumes would not be able to increase beyond this condition in the future./5/ Under future conditions, this capacity condition would occur for a period longer than the one-hour peak period.

Motor vehicle exhaust generated inside the parking garage would contain CO emissions. Any adverse health effects of CO generated inside the garage on residents of the proposed dwelling units would be minimal because the residential units (along Harrison Street) would be separated from the parking garage (along Bryant Street) by the Costco store.

Bread bakeries are generators of organic compounds. As yeast in the bread ferments, organic compounds are released. According to Bay Area Air Quality Management District (BAAQMD) Regulation 8, Organic Compounds, Rule 42, Large Commercial Bread Bakeries, appropriate measures must be made to limit and reduce the emissions of precursor organic compounds from bread ovens. However, this rule does not apply to bakeries producing less than 100,000 pounds of bread per day averaged over all operating days in any one month./6/

The bakery that would be contained within the proposed project would produce approximately 9,100 pounds of bakery products each day, seven days a week./7/ About one fifth of this amount contains yeast. Because less than 100,000 pounds of bread would be baked per day, Regulation 8 would not apply to the proposed bakery.

#### NOTES - Air Quality

- /1/ Association of Bay Area Governments, Bay Area Air Quality Management District, and Metropolitan Transportation Commission, *Bay Area '91 Clean Air Plan (CAP)*, Draft, April 1991.



- /2/ State standards for particulate matter changed in 1983 and federal standards changed in 1987 to concentrate on respirable particulate matter which has been demonstrated to have health implications when inhaled ( $PM_{10}$ ). Only those particulates 10 microns or less in size are measured under the  $PM_{10}$  standard. The BAAQMD (Thomas Perardi) has stated that TSP includes about 50-60% of particulates of 10 microns or less; thus, the TSP standards are generally equivalent to the  $PM_{10}$  standards. BAAQMD is presently monitoring  $PM_{10}$  at seven Bay Area monitoring stations, including the station at 16th and Arkansas Streets in San Francisco.
- /3/ California Department of Transportation, *1989 Traffic Volumes on California State Highways*, 1989. The existing (1989) peak hour traffic volume along U.S. 101 between Junction Route 80 and Mission Street / South Van Ness Avenue connections is 12,000 vehicles. Future traffic volumes are assumed to be at capacity conditions during the evening peak hour. This assumption is based upon future traffic volumes projected for U.S. 101 and the San Francisco Bay Bridge in the *Mission Bay EIR*.
- /4/ Worst-case meteorological conditions include stable atmospheric conditions, low wind speed, and the wind angle producing the highest CO concentration. EMFAC-7D emission factors were used.
- /5/ As a rule of thumb, capacity condition is considered to be 2,000 vehicles per lane per hour. U.S. 101 near the project site has six lanes or 12,000 vehicles during the peak hour.
- /6/ Bay Area Air Quality Management District, *Rules and Regulations*, Regulation 8, Organic Compounds, Rule 42, Large Commercial Bread Bakeries.
- /7/ Papadopoulos, Pete, Wahl & Associates, fax transmittal, August 14, 1990.

#### **E. CONSTRUCTION NOISE**

Ambient noise in the project vicinity is typical of urban settings, where noise levels are dominated by vehicular traffic. The *San Francisco Master Plan* indicates a day-night average noise level ( $L_{dn}$ ) of about 74 dBA,  $L_{dn}$  near the site in 1974./1,2/ One short-term noise measurement was made during the evening peak-hour traffic period during the weekday to characterize the ambient noise in the project area. The noise measurement was taken in front of a residence on 12th Street, east of Bernice Street, and northwest of Harrison Street. The ambient noise level at that area was 70 dBA,  $L_{eq}$ ./3/ The predominant noise source was auto and truck traffic.

Project construction would take place over about 10-12 months, and would increase noise levels in surrounding areas. Construction noise levels would fluctuate depending on construction phase, equipment type and duration of use, distance between noise source and listener, and presence or absence of barriers between noise source and listener. To estimate probable noise impacts, this analysis assumes typical equipment



and construction techniques. Table 10 shows typical exterior noise levels associated with the different phases of construction (see Appendix D, p. A.45, for a table of typical noise levels found in the everyday environment). Interior noise levels at 50 ft. from the noise source would be about 10 to 15 dBA less than those shown in Table 10. Closed windows would reduce noise levels by about 20 to 25 dBA below those shown in the table.

Construction noise is regulated by the San Francisco Noise Ordinance (Article 29 of the *City Police Code*). The ordinance requires that sound levels of construction equipment other than impact tools not exceed 80 dBA at a distance of 100 ft. from the source. Impact tools (jackhammers, pile-drivers, impact wrenches) must have both intake and exhaust muffled to the satisfaction of the Director of Public Works. Section 2908 of the Ordinance prohibits construction work at night, from 8:00 p.m. to 7:00 a.m., if noise would exceed the ambient noise level by five dBA at the project property line, unless a special permit is authorized by the Director of Public Works.

The retail, parking garage and housing components of the project would all require pile-driving. Pile-driving would occur intermittently over about eight weeks; hammering would occur during a five- to eight-minute period for each pile. Conventional unmuffled and unshielded pile-drivers emit noise levels of 100 to 110 dBA at a distance of 100 ft. each time the driver strikes the pile. The Department of Public Works allows pile-driving operation under certain conditions, which may include specifying relatively quiet equipment, predrilling pile holes, and/or specifying hours of operation to reduce the number of people exposed to noise effects.

Vibrations from the impact during pile-driving would be felt in adjacent and nearby buildings. These vibrations have been found to be more disturbing to some people than high noise levels. Noise at levels greater than 60 dBA can interfere with normal speech and concentration, noise levels greater than 70 dBA would require workers to close windows or shout to communicate. General stress reaction has been observed in humans exposed to brief sounds of 75 dBA./4/ At noise levels of 85 dBA, normal conversation is extremely difficult, and sleep or rest virtually impossible. Intermittent noises, such as pile-driving noise, reduce perception of control over the environment. This perceived loss of control frequently results in a depressed mood and depressed motivation. It has also been shown that high noise levels can lead to elevated blood pressure./5/ Repeated impulse and intermittent sounds of high level appear more likely to disrupt performance than continuous or steady sounds of comparable level./6/

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TABLE 10: TYPICAL COMMERCIAL/INDUSTRIAL CONSTRUCTION NOISE LEVELS, 50 FEET FROM SOURCE

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<u>Construction Phase</u>	<u>Duration of Phase/a/ (weeks)</u>	<u>Average Noise Level (dBA)</u>
Ground clearing	4	84
Foundations/b/	16	78
Erection	8	85
Exterior Finishing	8	89

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/a/ Manus, Clark, Project Architect, Heller & Leake, telephone conversation, October 9, 1990. Some phases of construction would overlap.

/b/ Time includes about eight weeks of pile-driving; noise level is for activities other than pile-driving. Exterior noise levels during pile-driving could reach 105 dBA at 50 ft. from the source.

SOURCE: Bolt, Beranek and Newman, December 31, 1971, *Noise from Construction Equipment and Home Appliances*, Environmental Protection Agency

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If pile-driving were to occur during the daytime, employees and other occupants of the adjacent commercial and industrial uses would be affected. In buildings across the street from the site, interior noise levels during pile-driving could reach 99 dBA with windows open and 89 dBA with windows closed. The nearest residences to the intersection are approximately 350 feet away on 12th Street, northwest of Harrison Street. They would experience noise levels of about 74 dBA with windows closed and about 84 dBA with windows open during pile-driving. These noise levels would result in occupants having to shout to communicate and would make telephone conversations difficult. These noise levels would require windows to be closed and normally would require noise barriers to be erected between the construction noise source and the receptor.

The project sponsor would require that the construction contractor limit pile-driving activity to result in the least disturbance to neighboring uses, and would consult with the Public Works Department to determine the least disruptive time for pile-driving. Pile holes would be predrilled, which would reduce the duration of pounding for each pile.

The U.S. Environmental Protection Agency (EPA) has determined that noise levels of 70 dBA,  $L_{eq}$  over a 24-hour day, assuming a 40-year exposure period, are the



maximum level at which conservation of hearing is ensured for virtually all of the population./7/ Assuming that actual piledriving would occur for about 45 minutes per day, the maximum suggested non-occupational noise exposure level would be about 93 dBA,  $L_{eq}$ ./8/ This noise level would be four dBA greater than the maximum noise levels of 89 dBA expected during piledriving in buildings across the street from the project site with windows closed.

Noise generated during pile-driving could be reduced by erecting barriers around the project site. Barriers may include such items as berms, walls, etc., that would affect sound propagation by interrupting it and creating an "acoustic shadow zone." The more solid, high and wide a noise barrier were, the more effectively it would attenuate noise. A wall may provide maximum noise reductions up to 20 dBA, while a berm may reduce noise levels a maximum of 23 dBA./9/ Typically, a reduction of about five dBA would be expected.

In summary, during the majority of construction activity, noise levels would be above existing levels in the area. There would be times, particularly during the operation of pile-drivers or impact wrenches, when noise would interfere with indoor activities in nearby commercial and light industrial facilities. These impacts would be temporary in nature and limited to the period of construction.

#### NOTES - Construction Noise

/1/ San Francisco Department of City Planning, *Environmental Protection, an Element of the Master Plan*, Transportation Noise Section, December 1987.

/2/ dBA is a measure of sound in units of decibels (dB). The "A" denotes the A-weighted scale, which simulated the response of the human ear to various frequencies of sound.

$L_{dn}$ , the day-night average noise level, is a noise measurement based on human reaction to cumulative noise exposure over a 24-hour period, taking into account the greater annoyance of nighttime noises; noise between 10 p.m. and 7 a.m. is weighted 10 dBA higher than daytime noise.

/3/  $L_{eq}$  is the equivalent steady-state sound level which in a stated period of time would contain the same acoustic energy as the time-varying sound level during the same time period. In urban noise environments dominated mainly by traffic noise, the 24-hour  $L_{dn}$  level is typically about the same as the peak-hour  $L_{eq}$ .

/4/ The Central Institute for the Deaf, *Effects of Noise on People*, U.S. EPA, 1971.

/5/ Sheldon Cohen, et al., "Cardiovascular and Behavioral Effects of Community Noise," *American Scientist*, Volume 69, October 1981.



- /6/ National Institute for Occupational Safety and Health, *Occupational Exposure to Noise*, U.S. Department of Health, Education and Welfare, 1972.
- /7/ U.S. Environmental Protection Agency, *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety*, March 1974.
- /8/ Cohen, A., J. Antioaglia, and H. H. Jones, "Sociocucsis -- Hearing Loss From Non-occupational Noise Exposure," *Sound and Vibration* 4(11) 12-20, November 1970, in Cornett, C. L. and C. Hina, *Methods for Predicting Noise and Vibration Impacts*, January 31, 1979.
- /9/ U.S. Department of Transportation, Federal Highway Administration, *Highway Noise*, December 1978.

#### **F. GEOLOGY AND SEISMICITY**

The project site is at about 13 feet, San Francisco City Datum (SFD)./1/ Surficial fill soils at the site are composed of human-made sandy fill with rubble including bricks, cobbles, metal, and wood fragments./2/ This fill ranges in thickness from about 3 to 9-1/2 feet. Remnants of concrete foundations and slabs of buildings which occupied the site in the past are also found near the surface. This, in turn, is underlain by less than 10 feet to over 50 feet of medium dense to very dense windblown sands. These deposits are underlain by a layer of soft to firm marine clay deposits known as "bay mud," 10 to 84 feet thick. Bedrock is encountered at the site at depths ranging from 35 to over 130 feet below the ground surface. Groundwater levels are expected to be encountered at about 0.5 feet to -1.0 feet, SFD./2/

Excavation for the project foundation would be needed. Elevator pits would require five feet of excavation (to eight feet SFD)./3/ Dewatering would be required during excavation if elevator pits reached groundwater levels. Dewatering could cause some settlement of adjacent buildings. The project includes measures to mitigate this potential impact (see mitigation, pp. 100-101). A driven pile foundation, supported in the bedrock and/or dense soils overlying the bedrock, would probably be required./4/ See pp. 82-86 for a discussion of construction noise and vibration impacts.

Excavation walls would be shored up to prevent lateral movement during excavation. The building contractor must comply with the *San Francisco Building Code* and the Excavation Standards of the California Occupational Safety and Health Agency. Additionally, lowering of the local water table by project dewatering could result in rotting of wooden piles in the site vicinity. Measures to mitigate such an impact

would be included as part of the project (see pp. 100-101). If appropriate, a preconstruction survey of adjacent buildings and streets would be made to establish existing elevations.

The closest active faults to San Francisco are the San Andreas Fault, about nine miles southwest of Downtown; the Hayward Fault, about nine miles northeast of Downtown; the San Gregorio Fault, about 20 miles west of Downtown; and the Calaveras Fault, about 22 miles east of Downtown. The project area would experience Violent (Intensity Level B, fairly general collapse of brick and frame structures when not unusually strong, serious cracking of better buildings, lateral displacement of streets, bending of rails and ground fissuring) groundshaking during a major earthquake./5/ The building would be required to meet current seismic engineering standards of the *San Francisco Building Code*.

The *Downtown Plan*, *South of Market Plan* and *Mission Bay EIRs* include information on Seismic Safety issues in the Downtown & Vicinity, of which the South of Market area is a part. In summary, the Downtown & Vicinity, like other parts of San Francisco and the Bay Area, is subject to potentially large earthquakes from the San Andreas and Hayward faults. Relatively more of the land in Downtown & Vicinity is subject to violent groundshaking intensity than the rest of the City because the eastern edge of the area is built on filled land. Employment growth, such as that expected in the proposed new building, would result in larger numbers of persons being exposed in the future to earthquake hazards if a seismic event occurred during the work day. New buildings are subject to more stringent building and structural standards than are older buildings. Therefore, persons working or residing in buildings such as the proposed project would be relatively safer than those in some older existing buildings. The bridges leading to/from San Francisco are expected to be closed for over three days due to damaged access ramps. The same would be true of the freeways heading south to the Peninsula. MUNI and Caltrain would be out of service for some time, and power outages would occur for at least one or two days. (See *Downtown Plan EIR* pp. IV.K.1-17a; *Mission Bay EIR*, Vol. II, pp. VI.K.11-15 and 33-43; *South of Market EIR*, pp. 154-174.)

An earthquake with an estimated magnitude of 7.1 on the Richter Scale occurred in the Bay Area in October 1989. The earthquake lasted about 15 seconds and caused damage in the epicentral region in Santa Cruz, Watsonville, Hollister and Los Gatos. San Francisco and other areas, as far as 50 miles from the epicenter, were also damaged.



Casualties and damage were caused by falling objects, collapsed structures, fire and miscellaneous injuries (such as heart attacks). Most of the casualties and damage were a result of ground shaking which caused the Cypress structure of I-880 to collapse, as well as collapse of a section of the Bay Bridge which rendered it closed to traffic for one month. The Cypress structure has since been demolished. Other structural damage was incurred on the Embarcadero Freeway and portions of I-280 and U.S. 101 (a further description of the damage is provided on pp. 31-32). In addition, several masonry structures (including brick chimneys) failed. Wood-frame buildings were jolted off their foundations in areas near the epicenter as well as in San Francisco and other Bay Area cities.

Ground failure also occurred, most notably in the Santa Cruz area near the epicenter. Landslides resulted in road closures and damage to structures. Liquefaction and ground settlement occurred in places further from the epicenter (for example, in the Marina District and the area south of Market Street in San Francisco, and the Oakland International Airport). Fires resulted from ruptured utility lines. The type of damage caused by the earthquake is typical of moderate sized earthquakes. Damage that occurred at distances up to 50 miles from the epicenter is evidence that the project area may be adversely affected by earthquakes occurring on any of the region's major faults.

Damage in the South of Market area was basically confined to buildings constructed prior to 1970. An earthquake of similar magnitude to (or larger than) the 1989 earthquake could occur again on the San Andreas, Hayward, or Calaveras faults. The *Mission Bay EIR* analyzes seismic impacts for an 8.4 magnitude earthquake on the Richter scale on the San Andreas Fault, a 6.9 magnitude on the Hayward Fault, a 7.3 magnitude on the Calaveras Fault, and a 7.1 magnitude on the San Gregorio Fault and describes damage conditions that generally are greater than what were experienced in October 1989. Other active faults in the region could produce smaller earthquakes.

An evacuation and emergency response plan would be developed as part of the proposed project (see mitigation, p. 101). The project's emergency plan would be coordinated with the City's emergency planning activities.

#### NOTES - Geology and Seismicity

- /1/ San Francisco City Datum establishes the City's zero point for surveying purposes at approximately 8.6 ft. above mean sea level.



- /2/ Lee and Praszker Consulting Geotechnical Engineers and Geologists, *Environmental Site Assessment: Costco Warehouse Project, Tenth and Harrison Streets, San Francisco, California*, Lee and Praszker, Inc., 147 Natoma Street, San Francisco, California, June, 1990.
- /3/ Goryl, Bill, Heller & Leake, project architect, personal communication, August 23, 1990.
- /4/ Lee and Praszker Consulting Geotechnical Engineers and Geologists, *Foundation Investigation: Costco Warehouse Project, Tenth and Harrison Streets, San Francisco, California*, Lee and Praszker, Inc., 147 Natoma Street, San Francisco, California, June, 1990.
- /5/ URS/John A. Blume and Associates, *San Francisco Seismic Safety Investigation*, 1974. Groundshaking intensities that would result from a major earthquake were projected and classified on a five-point scale ranging from E (Weak) through A (Very Violent).

#### G. HAZARDOUS MATERIALS

On the basis of information presented in Chapter III, Environmental Setting, there are three potential sources of contamination at the project site: residual soil or groundwater contamination from past site activities, potentially contaminated groundwater migrating onto the site from other properties in the vicinity, and possible contaminated fill. Of these, the first is most important at this site, and the only source likely to produce impacts. The city block that comprises the project site has a history of industrial use, and the potential for site contamination exists through misuse or improper disposal of hazardous materials, or from possible fuel spills or leaks from underground storage tanks (USTs) known to be present.

Because of the relatively shallow depth of excavation proposed for this project, groundwater contamination is not a threat and poses relatively little concern, except possibly in the area of the elevator pit. At that spot the base of the excavation would be near the top of the water table.

Prior to the soil sampling program, little was known of the quality and nature of the fill at the project site; in addition to the materials such as bricks, cobbles, metal, and wood fragments found in the geotechnical soil borings, other refuse might be present throughout the area./1/ Fill is often associated with elevated levels of a variety of soil contaminants, especially persistent contaminants such as metals. The soils sampling report, however, found little evidence of widespread contaminants in the fill./2/

Hazardous materials-related impacts of development at a paved urban site of the type seen at Tenth and Harrison Streets are typically related almost entirely to excavation and disposal of contaminated soils. Excavation, if improperly managed, could directly expose site workers, the public, or the environment to those contaminants. Such exposure would be the principal threat of the project to public health and safety. A relatively small amount of excavation is planned as part of the project. In addition to the elevator pit excavation, relatively shallow amounts of fill (two to eight feet) would be excavated and removed from the site. Additional material might be removed if the fill proves to be unsuitable for structural support.<sup>1/</sup> The geotechnical properties of the fill are not completely defined, so the extent of such excavation would not be known until construction begins. As the entire site is paved and covered, no routes of exposure for hazards associated with contaminated fill currently exist at the project site. Impacts could occur only when the fill is disturbed. Without excavation, no impacts would be anticipated. The potential impacts of excavation of contaminated fill in any amounts can be mitigated (see mitigation, pp. 101-102).

Activities that could lead to discovery and exposure of contaminated soils include site investigation, site remediation, excavation, and underground storage tank (UST) removal. Each of these activities could involve exposure of workers, the public and/or the environment to contaminated soils or other media. The discussion that follows is limited to specific project impacts of excavation and related earth-moving and site preparation activities, such as grading. Site investigation, site remediation, and UST removal are mitigation actions; impacts of those activities are discussed in Chapter V, Mitigation Measures, pp. 101-102.

### SPECIFIC PROJECT IMPACTS

Analysis of collected soil samples conducted to date has determined that contaminated fill is present in at least one location on the project site. In addition, historic records and field observations indicated that leaking or intact USTs could be encountered at the project site during excavation. Further testing and appropriate site remediation would be carried out as part of the project.

#### Health and Safety

The following hazardous materials descriptions are intended to provide basic information about toxicological characterization of the contaminants of concern; as to



the actual risk posed by the presence of such materials at the project site, only an appropriate risk assessment could determine the actual risk, if any, posed:

- *Polynuclear aromatic hydrocarbons (PNAs).* PNAs are a group of closely related organic compounds having chemical structures made up of two or more associated aromatic rings. All PNA compounds are toxic at particular concentrations, and several are carcinogenic. PNAs are produced as by-products when petroleum compounds are incompletely burned; they also occur naturally as products of plant biosynthesis. Potential routes of exposure are inhalation and ingestion. Acute toxicity does not appear to be a characteristic of PNAs, but several of the compounds are known to cause cancer./3/ Department of Health Services guidelines specify 10 mg/kg and 100 mg/kg to be cleanup levels for carcinogenic and noncarcinogenic PNAs, respectively./4/ PNA levels on portions of the site violated the standards; available information about PNA contamination is described in Chapter III, Environmental Setting, pp. 37-48. The most likely sources of PNA contamination would be petroleum residues associated with leaking tanks or other industrial activities.
- *Petroleum hydrocarbons.* Petroleum contamination results from spills or leaks of fuels such as gasoline, diesel, or waste oil, or from spillage or improper disposal of oils, tar, or asphalt. The most common source of petroleum contamination is leaking underground storage tanks. Several USTs are known to be present on the site and other, undocumented USTs might also be present. A previously unknown UST uncovered or disturbed during excavation, could threaten the health and safety of site workers. Hydrocarbon vapors can irritate the eyes and respiratory system. Fuels such as gasoline and diesel are flammable and would pose a potential fire hazard if present at relatively high concentrations in soil. A leaking UST could pose additional threats to groundwater resources and the environment, and could also pose a possible explosive hazard as well. Cleanup criteria are site specific and variable, but cleanup of petroleum hydrocarbons found at concentrations above 100 mg/kg is generally required for this type of site.
- *Lead.* Lead, a heavy metal, is a widespread environmental toxin. Lead has many metallurgical and other applications in industry, such as use in piping, tanks, solder, glass, and batteries; in the past it was used widely as a component of paints and gasoline. Routes of exposure include inhalation and ingestion of lead-contaminated particulates or dust, and skin and eye contact. Symptoms of lead poisoning include fatigue, sleep disturbance, headache, muscle aches, digestive upset, abdominal pain, and loss of appetite. Lead poisoning is chronic and becomes more severe as lead builds up in body tissues and bones. Long-term effects include anemia, loss of strength, kidney damage, and serious disorders of the central nervous system. Severe cases of chronic lead poisoning can result in delirium, coma, and death. Some lead compounds are carcinogens./3/ The lead levels seen in soils at the project site were very near background levels and could have come from any number of sources.

### Underground Storage Tanks

As noted earlier, at least three underground storage tanks (USTs) are known to be on the project site, and other unknown tanks could be present. Caution regarding USTs is



warranted because the property is in the area of San Francisco that has a history of UST use and abandonment. Any of the industries known to have occupied the site could have used USTs for fuel storage.

All USTs found at the property during construction activities would have to be closed in place or removed as part of the project. Closure of a UST in place would likely cause relatively minimal exposure of workers and the public to potential hazards. A UST left in the ground, however, could present a long-term source of potential contamination to the environment. UST removal could pose both health and safety risks, such as the exposure of workers, tank handling personnel, and the public to tank contents or vapors. Risks would be minimized by following required procedures for UST cleaning and removal. In San Francisco, both the Fire Department and Department of Public Health supervise UST removals to enforce enactment of appropriate safety procedures and soil sampling and testing provisions. Removal of a tank, if found, would be done under the guidance of those agencies, as required by law.

#### Site Remediation

For the project site, site remediation would be required by the San Francisco Department of Public Health for areas of contaminated soils. Site remediation would be guided by a Site Remediation Plan, as called for in the soils testing report.<sup>2/</sup> The remediation plan would include the following: further testing of soils as site preparation and excavation is carried out, proposed methods of treating hazardous soils in a manner that would render them nonhazardous or otherwise protect public health and safety, and plans for final disposal of soils, treated or otherwise. To minimize possibilities of remediation impacts, worker and public health and safety requirements described in Appendix E, pp. A.46-54, would apply during remediation activities.

Potential impacts of remediation would be mitigated, in part, by legally required safety and hazardous waste handling and transportation precautions. For hazardous waste workers, federal Occupational Safety and Health Administration (OSHA) regulations mandate an initial 40-hour training course and subsequent annual training review. Additionally, site-specific training would be required for some workers. In responsible agency review of mitigation plans, procedures for protection of the public during remediation would be evaluated. These measures, along with application of clean-up standards, would serve to protect human health and the environment during site remediation, thus minimizing remediation impacts.

Additional site investigation would be performed as part of site remediation.

Additional investigation would include collection of about 30 soil samples at the site, transportation of the samples to an analytical laboratory, and analysis and reporting. Because relatively small amounts of materials are collected as samples, exposure to potential hazards during site investigation would be limited, and associated impacts would be localized. Contaminated soil would be temporarily stockpiled and tested prior to disposal.

- The remediation plan for the project site has been reviewed by an independent consultant. The consultant has certified that if the remediation measures are carried out as described, then health, safety, and environmental risks will be mitigated. The remediation plan, titled *Costco Wholesale Hazardous Waste Site Mitigation Plan*/7/, is summarized and cited in the EIR on pp. 40, 47, 101, and 102, and is on file and available for review at the Office of Environmental Review, Department of City Planning, 450 McAllister Street, San Francisco.

### CUMULATIVE IMPACTS

If contaminated fill were to be removed from the site during project implementation, the project would contribute to cumulative impacts on the region's hazardous waste handling capacity. Treatment and disposal of hazardous wastes are issues of national importance. Federal and state legislation is attempting to address those issues. At the Federal level, the Resource Conservation and Recovery Act Hazardous and Solid Waste Amendments of 1984 prohibit the land disposal of untreated wastes as of May, 1990 (the "land ban"). EPA currently has promulgated treatment standards for the applicable hazardous wastes. Wastes that meet the standards are not subject to the prohibition and may be land disposed. The law states that if there is insufficient treatment capacity nationwide, the ban date may be extended for up to two years. In addition, the EPA may grant a petition to allow land disposal of an untreated waste at any specific site upon demonstration that no migration of any hazardous constituents can occur from the site./5/

California law, the Hazardous Waste Management Act of 1986, is similar to Federal land ban law. It specifies that after May, 1990, hazardous wastes must be treated to adopted standards for disposal within the state and land disposal is restricted. California law also encourages recycling and reuse, and allows shipment out-of-state for hazardous wastes that cannot meet treatment standards./5/

Landfill space for hazardous waste is relatively limited. As of mid-1989, there were twenty-four hazardous waste landfills in the United States that were open to commercial hazardous waste generators. Of these, seven are located in western states./6/ On a national level, hazardous waste landfill space is relatively limited and will grow even more limited as landfill capacities gradually become exhausted. The intent of the land ban legislation is to address the fundamental error of reliance on land disposal by forcing waste generators and handlers to seek alternatives. Because



hazardous waste landfill space is limited and efficient and environmentally acceptable hazardous waste treatment technologies have yet to be developed fully, handling of hazardous waste is becoming an increasingly important problem.

### NOTES - Hazardous Materials

- /1/ Lee and Praszker Consulting Geotechnical Engineers and Geologists, *Foundation Investigation: Costco Warehouse Project, Tenth and Harrison Streets, San Francisco, California*, Lee and Praszker, Inc., 147 Natoma Street, San Francisco, California, June, 1990.
- /2/ Environmental Science Associates, Inc., *Costco Wholesale Soil Sampling and Analysis Report*, May 1991.
- /3/ Marshall Sittig, *Handbook of Toxic and Hazardous Chemicals and Carcinogens*, Second Edition, Noyes Publications, Park Ridge, New Jersey, 1985, pp. 118-119, 739-742.
- /4/ Bufton, Beth, Toxic Substances Control Division, California Department of Health Services, telephone conversation, January 12, 1990.
- /5/ California Department of Health Services, "Land Disposal Restriction Newsletter," Toxic Substances Control Division, Alternative Technology Section, January, 1988.
- /6/ EI Digest, *Industrial Hazardous Waste Management*, Environmental Information, Limited, February, 1989.
- /7/ The remediation plan, titled *Costco Wholesale Hazardous Waste Site Mitigation Plan*, prepared by Environmental Science Associates, Inc. in October 1991 and reviewed and certified by Levine-Fricke in November 1991, is on file at the Office of Environmental Review, Department of City Planning, 450 McAllister Street, San Francisco.

### H. GROWTH INDUCEMENT

The project would add about 118,500 sq. ft. of retail space, 60 to 80 affordable dwelling units, and 780-800 parking spaces (720 spaces for the retail use and 60-80 spaces for the residential use) to the site. An additional 170 retail-serving parking spaces could be added to the site at a later date. There are currently four persons employed on the project site; employment with the project would increase to about 75-85 full time jobs and 75-85 part time jobs.

The project would add additional bulk-merchandise type retail uses in the area, similar to the Canned Foods Grocery Outlet located two blocks west of the site on Harrison Street between Thirteenth and Alameda Streets. The project would also add multi-family residential use to an area presently containing a number of multi-family residential structures.

About 125-225 persons would be expected to live in the residential component of the project. Occupants of the proposed project could include tenants relocating from other locations in the South of Market Area and tenants relocating from other areas of San Francisco. If the project were fully leased, however, and the residential space of the project did not create permanent vacancies in other such buildings, the number of total residents in San Francisco could increase by about 125-225 persons due to the project.

The project could have growth-inducing effects by demonstrating a market for bulk-merchandise type retail space in the area; this could encourage similar development on lots currently vacant or occupied by underused buildings in the area.

As there would be a net increase in employment as well as a net increase in residents, there could be an increase in the demand for retail goods and business service in the project area. Some of the project's occupants and employees could be relocating from other housing or jobs in the area and thus could already be using existing services in the South of Market area.

The project would be built in a developed urban area, and no expansion to the municipal infrastructure not already under consideration would be required to accommodate new development due to, or induced by, the project.

## **V. MITIGATION MEASURES PROPOSED TO MINIMIZE POTENTIAL ADVERSE IMPACTS OF THE PROJECT**

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In the course of project planning and design, measures have been identified that would reduce or eliminate potential environmental impacts of the proposed project. Some of these measures have been, or would be, adopted by the project sponsor or project architects and contractors and thus are proposed; some are under consideration. Implementation of some may be the responsibility of public agencies. Measures under consideration may be required by the City Planning Commission as conditions of project approval, if the project were to be approved. Each mitigation measure and its status is discussed below.

There are several items required by law which would serve to mitigate impacts, and are summarized here for informational purposes. These measures include: no use of mirrored glass on the building to reduce glare, as per City Planning Commission Resolution 9212; provision of off-street bicycle storage pursuant to Section 155 of the *Planning Code*; limitation of construction-related noise levels, pursuant to the San Francisco Noise Ordinance (Article 29 of the *San Francisco Police Code*, 1972); consultation with and approval from the San Francisco Department of Public Works Industrial Waste Division if treated groundwater were to be discharged to the City sewer; handling and transportation of hazardous wastes done under manifest and restricted to persons with appropriate training and licensing; and observance of federal and state OSHA safety requirements for hazardous waste sites including the hazardous waste site safety training requirements of 29 CFR 1910.120.

Additional measures which are not required by legislation but which would also serve to mitigate environmental impacts appear below. Mitigation measures preceded by an asterisk (\*) are from the Initial Study (see Appendix A, pp. A.1-32).

### **CULTURAL RESOURCES**

#### **MEASURES PROPOSED AS PART OF THE PROJECT**

- The sponsor would retain the services of an archaeologist. The Environmental Review Officer (ERO) in consultation with the President of the Landmarks Preservation Advisory Board (LPAB) and the archaeologist would determine



whether the archaeologist should instruct all excavation and foundation crews on the project site of the potential for discovery of cultural and historic artifacts, and the procedures to be followed if such artifacts are uncovered.

Given the archival history of the project site, an historical archaeologist would be present during site excavation and would record observations in a permanent log. The ERO would also require cooperation of the project sponsor in assisting such further investigations on site as may be appropriate prior to or during project excavation, even if this results in a delay in excavation activities.

- Should archaeological resources be found following commencement of excavation activities, the archaeologist would assess the significance of the find, and immediately report to the ERO and the President of the LPAB. Upon receiving the advice of the consultants and the LPAB, the ERO would recommend specific mitigation measures, if necessary. Excavation or construction activities which might damage the discovered cultural resources would be suspended for a maximum of four weeks (cumulatively for all instances where the ERO has required a delay in excavation or construction) to permit inspection, recommendation and retrieval, if appropriate.
- Following site clearance, an appropriate security program would be implemented to prevent looting. Any discovered cultural artifacts assessed as significant by the archaeologist upon concurrence by the ERO and the President of the LPAB would be placed in an appropriate repository as determined by the ERO. Copies of the reports prepared according to these mitigation measures would be sent to the California Archaeological Site Survey Office at Sonoma State University along with three copies to the ERO.

## **TRANSPORTATION**

### MEASURES PROPOSED AS PART OF THE PROJECT

- During the construction period, construction truck movement would be permitted only between 9:00 a.m. and 3:30 p.m. Monday through Friday to minimize peak-hour traffic conflicts. The project sponsor and construction contractor would meet with the Traffic Engineering Division of the Department of Parking and Traffic, the Fire Department, MUNI and the Department of City Planning to determine feasible traffic mitigation measures to reduce traffic congestion during construction of this project and other nearby projects. To minimize cumulative traffic impacts due to lane closures during construction, the project sponsor would coordinate with construction contractors for any concurrent nearby projects that are planned for construction or which later become known.
- The project sponsor would, in consultation with the Municipal Railway, install eyebolts or make provisions for direct attachment of eyebolts for MUNI trolley wires on the proposed building wherever necessary or agree to waive the right to refuse the attachment of eyebolts to the proposed building if such attachment is done at City expense.
- The placement of paving, landscaping or structures in the sidewalk area (subject to City approval) would be done in such a way as to minimize interference with pedestrian traffic.

- While subsurface sidewalk vaults are discouraged, the project sponsor would design subsurface sidewalk vaults to allow for possible future widening of adjacent streets. Vault design shall be of sufficient strength to carry maximum vehicular live and dynamic loads. Design of the vault area to accommodate street trees could also be made, subject to Department of Public Works approval. In addition, should vaults exist or be installed as part of the project, the project sponsor would accommodate and pay for the installation of all subsurface footings, supports and foundations as may be required for future public improvements such as street lights, street trees, trolley wire poles, signs, benches, transit shelters, etc. within project vault areas. Placement of such improvements is entirely within the discretion of the City.
- The Tenth Street parking lot access would be restricted to an entrance only with no exiting. Through traffic on Tenth Street during the p.m. peak period is often heavy, whereas Bryant Street is relatively free flowing during this period. Exiting traffic from the project would be directed to use the Bryant Street exit.
- Adequate space would be provided in the parking lot to accommodate all project truck maneuvers on the project site.

#### MEASURES UNDER CONSIDERATION BY PROJECT SPONSOR

- The project sponsor could make formal arrangements for the shared use of project parking by employees of the Social Services Department located across Harrison Street during weekdays and by club patrons in the project vicinity during the evenings.

#### MEASURES THAT COULD BE IMPLEMENTED BY PUBLIC AGENCIES

- A separate left-turn lane would be required in the westbound direction at the intersection of Eleventh Street / Harrison Street to facilitate acceptable LOS operations (LOS D) at this location during the period of peak-month traffic. This separate left-turn lane could be accommodated by removing parking on the south side of Harrison Street for 200 feet east of the intersection or by transitioning eastbound Harrison Street from two lanes to one lane at this intersection. Year 2000 conditions would be mitigated by this measure from LOS F to LOS D/E ( $V/C=0.91$ ) with operating conditions borderline unacceptable.
- Coordinate work schedules of Pacific Gas and Electric Company and other utilities requiring trenching, so that street disruption would take place during weekends and off-peak hours. This should be done through the San Francisco Committee for Utility Liaison on Construction and Other Projects (CULCOP). In-street utilities should be installed at the same time as the street is opened for construction of the project to minimize street disruption. It is public policy that any underground storage tanks that are under sidewalks on the perimeter of the project be removed.
- The City could act upon or endorse the implementation of transportation mitigations described in the *Mission Bay EIR* Vol. II, Section VI.E, Mitigation, pp. VI.E.214-VI.E.217 for the year 2000 and VI.E.224-VI.E.231 for 2020, and in the *South of Market EIR*, pp. 189-194. The measures for the year 2000 include: constructing and maintaining rail rapid transit lines from downtown San Francisco to suburban corridors and major non-downtown centers in



San Francisco; increased funding for Vehicle Acquisition Plans for San Francisco and regional transit agencies to expand existing non-rail transit service; providing exclusive transit lanes on City streets and on freeways; reducing incentives to drive by discouraging long-term parking; encouraging carpools, vanpools, and bicycle use; improving pedestrian circulation within downtown San Francisco; and providing transportation brokerage services. The *Mission Bay EIR* describes various types of measures to illustrate the magnitude of improvements needed to mitigate the impacts of regional growth in 2020.

Some of the implementing actions would require approval by decision-makers outside the City and County of San Francisco; many of the measures would require action by City agencies other than the City Planning Commission, such as the San Francisco Public Utilities Commission and/or Board of Supervisors. All except such things as providing transportation brokers would require funding from or approval by MTC. These measures are system-wide measures that must be implemented by public agencies. Other than project-specific measures such as the relevant transportation mitigation measures described above as part of the project or such measures as the Transit Impact Development Fee assessment required by San Francisco ordinance 224-81 which contribute indirectly to implementation of these system-wide measures, it is not appropriate to impose mitigation at system-wide levels on individual projects.

### AIR QUALITY

#### MEASURE PROPOSED AS PART OF THE PROJECT

- \*• The project sponsor would require the contractor to sprinkle demolition sites with non-potable water continuously during demolition activity; sprinkle unpaved construction areas with water at least twice per day; cover stockpiles of soil, sand, and other material; cover trucks hauling debris, soils, sand or other such material; and sweep streets surrounding demolition and construction sites at least once per day to reduce particulate emissions. The project sponsor would require the project contractor to maintain and operate construction equipment so as to minimize exhaust emissions of particulates and other pollutants, by such means as a prohibition on idling of motors when equipment is not in use or when trucks are waiting in queues, and implementation of specific maintenance programs to reduce emissions for equipment that would be in frequent use for much of the construction period.

### NOISE

#### MEASURES PROPOSED AS PART OF THE PROJECT

- \*• As recommended by the Environmental Protection Element of the *San Francisco Master Plan*, an analysis of noise reduction measures for the residential units would be prepared by the project sponsor and recommended noise insulation features would be included as part of the proposed multi-family residential units. For example, such design features could include fixed windows and climate control.



- The project sponsor would require that the project contractor predrill holes (if feasible based on soils) for piles to the maximum feasible depth to minimize noise and vibration from pile driving. The actual pounding from pile driving would occur during a five- to eight-minute span per pile.
- The project sponsor would consult with the Department of Public Works to determine the time when pile driving would cause the least disturbance to neighboring uses. The project sponsor would require that the construction contractor limit pile driving activity to result in least disturbance. This could require a work permit from the Director of Public Works pursuant to San Francisco Noise Ordinance Section 2908, if pile driving during daytime hours is determined to be less disruptive to neighboring uses.
- The project sponsor would require the general contractor to construct barriers around the site, and around stationary equipment such as compressors, which would reduce construction noise by as much as five dBA, and to locate stationary equipment in pit areas or excavated areas, as these areas would serve as noise barriers.

### GEOLOGY/TOPOGRAPHY/HYDROLOGY

#### MEASURES PROPOSED AS PART OF THE PROJECT

- The project sponsor and contractor would follow the recommendations of the final geotechnical report(s) regarding any excavation and construction for the project.
- \*• If the project were to include dewatering, groundwater pumped from the site would be retained in a holding tank to allow suspended particles to settle, if this is found necessary by the Industrial Waste Division of the Department of Public Works, to reduce the amount of sediment entering the storm drain/sewer lines.
- The project sponsor would require the general contractor to install and maintain sediment traps in local stormwater intakes during the construction period to reduce the amount of sediment entering the storm drain/sewer lines, if this is found necessary by the Industrial Waste Division of the Department of Public Works.
- The final soils report would also recommend whether or not watering of piles of adjacent structures would be necessary. If it were found to be necessary to water adjacent piles, the project sponsor would ensure that the general contractor complied with recommendations of the soils report.
- Should dewatering be necessary, the final soils report would address the potential settlement and subsidence impacts of this dewatering. Based upon this discussion, the soils report would contain a determination as to whether or not a lateral and settlement survey should be done to monitor any movement or settlement of surrounding buildings and adjacent streets. If a monitoring survey is recommended, the Department of Public Works would require that a Special Inspector (as defined in Article 3 of the *Building Code*) be retained by the project sponsor to perform this monitoring. Groundwater observation wells would be installed to monitor the level of the water table and other instruments would be



## V. Mitigation Measures

used to monitor potential settlement and subsidence. If, in the judgment of the Special Inspector, unacceptable subsidence were to occur during construction, groundwater recharge would be used to halt this settlement. The project sponsor would delay construction if necessary. Cost for the survey and any necessary repairs to service under the street would be borne by the project sponsor.

- If dewatering is undertaken for the project, the groundwater level in the site vicinity should be monitored. If lowering of the groundwater table were to threaten wooden pile foundations, groundwater recharge would be used to stabilize the groundwater level.
- In order to reduce potential injury to building occupants during an earthquake or other catastrophic emergency, an evacuation and emergency response plan would be developed by the project sponsor or building management staff, in consultation with the Mayor's Office of Emergency Services to ensure coordination between the City's emergency planning activities and the project's plan and to provide for building occupants in the event of an emergency. The project plan would be reviewed by the Office of Emergency Services and implemented by building management insofar as feasible before issuance by the Department of Public Works of final building permits.
- To expedite implementation of the City's emergency response plan, the project sponsor would prominently post information for building occupants concerning what to do in the event of a disaster.

## **WATER QUALITY**

### MEASURES PROPOSED AS PART OF THE PROJECT

- See the second and third measures under Geology/Topography/Hydrology, above, for mitigation proposed to prevent sediment from entering storm sewers.

## **HAZARDOUS MATERIALS**

### MEASURES PROPOSED AS PART OF THE PROJECT

- A Site Remediation Plan has been prepared to manage cleanup of soils contaminated with lead, petroleum, and polynuclear aromatic hydrocarbons. The remediation plan provides for collection of approximately thirty soil samples, spaced in a grid pattern across the site and analyzed for the three contaminants of concern. Additional samples would be collected and tested in areas found to be contaminated, especially in the vicinity of test sample TB-2. The remediation plan includes provisions to minimize threats to public health and the environment that might result from handling the hazardous soil, including a dust control program, provisions for stockpiling, testing, and disposal of the hazardous soil, and verification testing of soil substrate. At the completion of remediation, all hazardous wastes identified in the excavation area would have been relocated and properly disposed, and any hazardous wastes remaining in the underlying soils would be slated for encapsulation on the site (paved over). The remediation plan has been submitted to the San Francisco Department of Public Health for review and certified by an independent third party./1/

- A site-specific Health and Safety Plan has been prepared and would be implemented before site activities would proceed. The plan, which is applicable to all activities at the site prior to completion of remediation, establishes policies and procedures to protect workers from potential hazards posed by hazardous wastes. The Health and Safety Plan has been prepared according to National Institute for Occupational Safety and Health guidelines;<sup>/2/</sup> it has been submitted to the San Francisco Department of Public Health for their examination and incorporated into the Site Remediation Plan.
- A geotechnical survey would be performed during site preparation to locate all underground storage tanks (USTs) on the property, including those under the sidewalks. In accordance with San Francisco Department of Public Health regulations, all USTs on the site would be remediated under the supervision of the Health Inspector for underground storage tanks. BAAQMD Regulation 8, Rule 40, "Aeration of Contaminated Soil and Removal of Underground Storage Tanks," would apply during underground storage tank removal or handling of soil contaminated with petroleum or other volatile organic chemicals. Tank removal would be done in coordination with the San Francisco Fire Department.
- The project sponsor would employ licensed hazardous waste specialists to handle the project's hazardous waste disposal needs in order to promote application of most modern, effective and efficient methods of waste treatment and disposal.
- A closure report describing the remediation process and certifying completion of remediation would be prepared by a Registered Environmental Assessor, registered engineer, or registered geologist. The closure report is a requirement of the remediation plan. The report would contain full remediation documentation, including chain-of-custody forms, laboratory analysis reports, and hazardous waste transport manifests. The report would be submitted to the San Francisco Department of Public Health.

### NOTES - Mitigation Measures

- /1/ The remediation plan, titled *Costco Wholesale Hazardous Waste Site Mitigation Plan*, prepared by Environmental Science Associates, Inc. in October 1991 and reviewed and certified by Levine-Fricke in November 1991, is on file at the Office of Environmental Review, Department of City Planning, 450 McAllister Street, San Francisco.
- /2/ National Institute for Occupational Safety and Health, *Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities*, U.S. Department of Health and Human Services, DHHS Publication No. 85-115, October, 1985.



## **VI. SIGNIFICANT ENVIRONMENTAL EFFECTS THAT CANNOT BE AVOIDED IF THE PROPOSED PROJECT IS IMPLEMENTED**

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In accordance with Section 21067 of the California Environmental Quality Act (CEQA), and with Section 15040, 15081 and 15082 of the State CEQA Guidelines, the purpose of this chapter is to identify impacts that could not be eliminated or reduced to an insignificant level by mitigation measures included as part of the proposed project, or by other mitigation measures that could be implemented, as described in Chapter V. Mitigation Measures, pp. 96-102.

Traffic increases resulting from the proposed project would cause the p.m. peak hour level of service at the intersection of Eleventh and Harrison Streets to decline from LOS C to LOS D during the average month, which would not be considered a significant impact. However, the p.m. peak hour level of service at this intersection would further decline to LOS E during the peak month, which would be considered a significant impact.

Cumulative development in the South of Market Area would have a significant effect on the environment in that it would generate cumulative traffic increases. This cumulative transportation impact could cause violations of the emission standards for fine particulate matter in San Francisco with concomitant health effects. The proposed project would contribute to this cumulative effect.

The project would increase the population on the site above existing conditions that would be subject to substantial danger during a major earthquake. Although the project would meet the most current building and seismic engineering requirements of the *San Francisco Building Code*, greater concentrations of people would be susceptible to injury. Such population also would contribute to congestion which, along with the debris in the streets, would impede the access of emergency services responding to fire and other earthquake-related emergencies.

## **VII. ALTERNATIVES TO THE PROPOSED PROJECT**

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This chapter identifies alternatives to the proposed project, discusses environmental impacts associated with these alternatives, and gives the reasons the alternatives were rejected in favor of the project. Regardless of the sponsor's reasons for rejection, the City Planning Commission could approve an alternative instead of the proposed project if the Commission believed the alternative would be more appropriate for the site.

### **A. ALTERNATIVE A: NO PROJECT**

#### **DESCRIPTION**

This alternative would entail no change to the site. The proposed project would not be built. The parking lot on the site would be retained.

#### **IMPACTS**

If the No Project Alternative were implemented, none of the impacts associated with the project would occur. The environmental characteristics of this alternative would be generally as described in the Environmental Setting sections of this report (see Chapter III. Environmental Setting, pp. 25 to 48, for a discussion of existing conditions). Transportation and noise impacts associated with construction of the project would not occur. Transportation and air quality conditions (as described in Chapter IV. Environmental Impacts, pp. 49 to 95) as base conditions with cumulative development, but without the project, would continue to exist around the site. There would be no change in energy demand on the site. Employment on the site would not increase as it would with the project. Housing would not be developed on the site under this alternative. Land uses would not change. This alternative would contribute to cumulative impacts on transportation at local intersections and to additional air quality impacts in as much as the existing public parking use of the site would continue. However, the magnitude of impact would be less than that generated by the project. This alternative would preserve the option to develop a similar or different type of project on the site in the future.

## STATUS OF THIS ALTERNATIVE

This alternative was rejected by the project sponsor because it would not use the development potential of the site allowable under the *South of Market Plan*.

### **B. ALTERNATIVE B: COSTCO STORE ONLY**

#### DESCRIPTION

This alternative would consist of the retail component of the project, and would not contain any housing. The site would be developed with 118,500 sq. ft. of retail space, 4,500 sq. ft. of loading area, 480 sq. ft. of open space, and 346,970 sq. ft. of parking (about 720 spaces). As with the proposed project, an additional 170 parking spaces could be constructed at a later date. As with the proposed project, parking in excess of 651 spaces (434 required spaces and 217 accessory spaces) could be provided as a principal permitted use if available for use by the operators, employees, clients, and/or visitors of a permitted, or approved conditional, non-residential use in the vicinity, per Section 817.28 of the *City Planning Code*. As this alternative would not contain any housing, Conditional Use authorization for residential use would not be required.

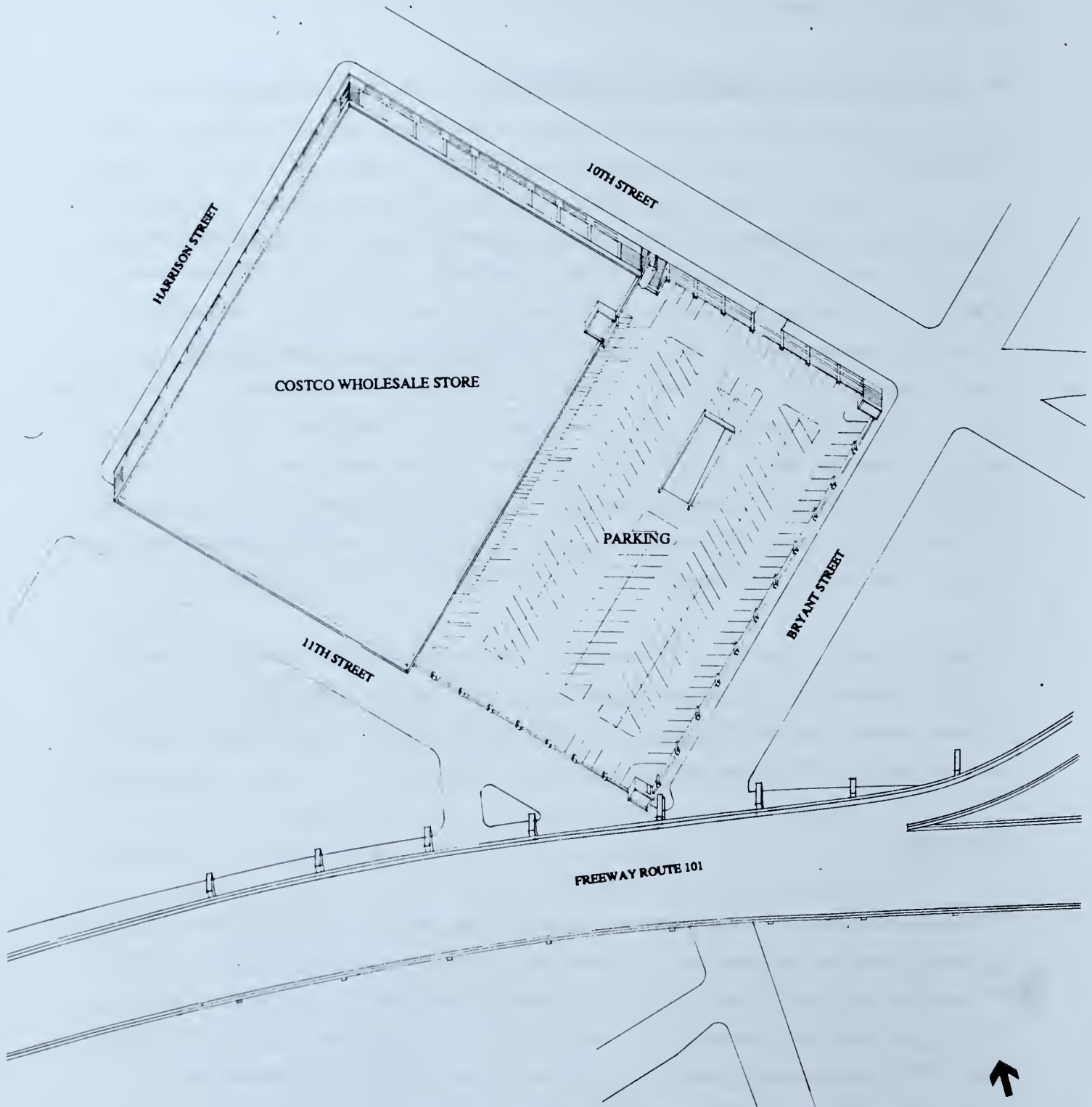
As with the project, the Costco Wholesale store would be elevated on a podium on the southern portion of the site (along Bryant Street) with parking located below and adjacent to the store (see Figure 11). The FAR of this alternative would be 0.55:1, the same as for the retail component of the proposed project.

#### IMPACTS

The building envelope of this alternative would be the same as with the proposed project. Therefore, visibility of this alternative in mid- and long-range views would be the same as with the project. Construction noise impacts for this alternative would be the same as with the proposed project, as the construction duration would be about the same. The potential during construction for encountering subsurface hazardous materials or cultural resources would be similar for this alternative and for the proposed project, as a similar amount of site excavation and grading would be expected.

This alternative would have the same retail-related trip generation as the proposed project (about 5,840 weekday trips and about 6,640 Saturday trips under normal





SOURCE: Heller and Leake

Costco Wholesale ■

**Figure 11**  
Alternative B:  
Costco Store Only

circumstances, and about 7,800 weekday trips and about 8,800 Saturday trips during the peak month). This alternative would not have the residential-related trip generation identified for the project (about 210 weekday and Saturday vehicle trips). Consequently, traffic and air quality effects on local intersections would be incrementally lower under this alternative.

As with the project, this alternative would provide 75-85 full time jobs and 75-85 part time jobs. No new dwelling units would be added to the site under this alternative, and thus affordable housing would not be added to the area. Growth-inducing impacts of this alternative would be similar to the retail-related impacts identified for the project.

## STATUS OF THIS ALTERNATIVE

The project sponsor would like to reserve the right to consider this alternative.

### ● **C. ALTERNATIVE C: REDUCED PARKING**

#### DESCRIPTION

This alternative would consist of the same types and amounts of uses as the proposed project except that the retail component of the project would include about 650 rather than 720 parking spaces. The square footage of the retail component's parking area would be the same as with the proposed project, but the configuration of parking spaces within the area would yield about 650 rather than 720 spaces. Although the parking area would only accommodate about 650 spaces under this alternative due to planning and technical considerations, the overall building envelope of the parking structure would be the same as for the proposed project. The site would be developed with 118,500 sq. ft. of retail space, 4,500 sq. ft. of loading area, 480 sq. ft. of open space, and 346,970 sq. ft. of parking. The site would also be developed with 60 to 80 dwelling units above 60 to 80 residential parking spaces. As with the proposed project, an additional parking level (containing about 150 parking spaces for this alternative) could be constructed at a later date. Such additional parking, in excess of 651 spaces (434 required spaces and 217 accessory spaces), could be provided as a principal permitted use if available for use by the operators, employees, clients, and/or visitors of a permitted, or approved conditional, non-residential use in the vicinity, per Section 817.28 of the *City Planning Code*.

As with the project, the Costco Wholesale store would be elevated on a podium on the southern portion of the site (along Bryant Street) with parking located below and adjacent to the store. The FAR of this alternative would be 0.55:1, the same as for the proposed project.

### IMPACTS

The building envelope of this alternative would be the same as with the proposed project. Therefore, visibility of this alternative in mid- and long-range views would be the same as with the project. Construction noise impacts for this alternative would be the same as with the proposed project, as the construction duration would be about the same. The potential during construction for encountering subsurface hazardous materials or cultural resources would be similar for this alternative and for the proposed project, as a similar amount of site excavation and grading would be expected.

This alternative would have the same retail-related trip generation as the proposed project (about 5,840 weekday trips and about 6,640 Saturday trips under normal circumstances, and about 7,800 weekday trips and about 8,800 Saturday trips during the peak month). This alternative would also have the same residential-related trip generation identified for the project (about 210 weekday and Saturday vehicle trips).

- The proposed parking supply of 650 spaces for the retail component of the project would yield an effective parking supply of about 585 effective spaces after application of the 90% efficiency factor described on pp. 72-73 of the EIR. Based on an effective supply of about 585 parking spaces, there would be an estimated surplus of 75 parking spaces under average month weekday conditions, a deficit of about 40 spaces under average month Saturday conditions, a deficit of about 60 spaces under peak month weekday conditions, and a deficit of about 205 spaces under peak month Saturday conditions.
- During weekday conditions, on-street facilities in the project area are operating at effective capacity (more than 90% occupied) during the midday peak period. Spillover from Costco would be forced to compete for these parking spaces and would impact parking conditions in the area. The estimated weekday spillover of 60 spaces would likely result in queues forming at the access points to the project, and circling activities as vehicles wait for parking spaces within or adjacent to the project to vacate.



During weekend and holiday periods, on-street parking in the area of the project is estimated at 55% occupied indicating that an estimated 825 on-street spaces are available in the study area. The estimated Saturday deficit of about 205 spaces would exceed the number of on-street spaces in the immediate area of the project and some Costco patrons would likely park up to two blocks from the site, wait within the parking lot for spaces to become available, or queue on Tenth and Eleventh Streets to enter the parking lot. This condition would prevail for weekends between Thanksgiving and New Year's as well as for other relatively heavy shopping weekends scattered throughout the year. The queuing and circling activities described above could contribute to short-term, temporary reductions in area intersection LOS.

During peak month weekday and peak month Saturday conditions, when parking demand would exceed the sum of on-site supply and on-street supply on adjacent blocks, the resulting parking spillover would impact parking conditions at existing uses in the area. On-street parking adjacent to the Costco would be full and patrons of other businesses in the area, who compete for on-street parking spaces during existing weekday conditions and park with little difficulty during existing Saturday conditions, would be forced to share the existing supply with Costco patrons.

The above-described parking deficits and resultant off-site queuing and traffic disruption would not constitute a significant environmental impact due to its small size (in the case of average Saturdays and peak weekdays) and limited times of year (in the case of greater parking deficits on peak shopping weekends).

As with the project, this alternative would provide 75-85 full time jobs and 75-85 part time jobs. Growth-inducing impacts of this alternative would be similar to those identified for the project.

#### STATUS OF THIS ALTERNATIVE

The project sponsor would like to reserve the right to consider this alternative.

#### **D. ALTERNATIVE D: HOUSING WITH PUBLIC OPEN SPACE**

##### DESCRIPTION

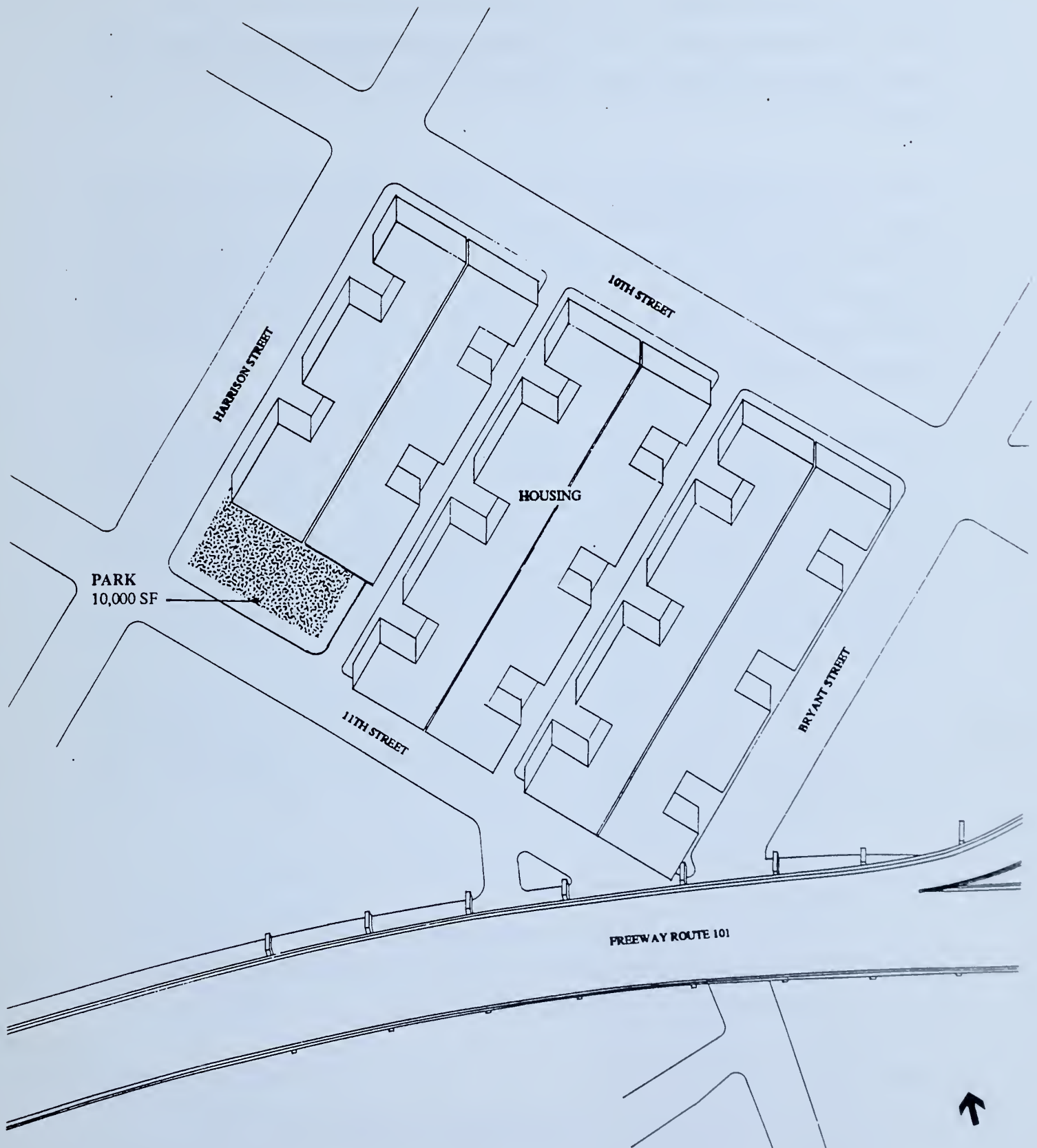
This alternative would consist of approximately 1,075 dwelling units, 1,075 residential-serving parking spaces, and 10,000 sq. ft. of publicly accessible open space to primarily serve residents that would occupy the site under this alternative (see Figure 12). This alternative would not contain any retail uses. This alternative would have a dwelling unit density of one unit per 200 sq. ft. of lot area (excluding the 10,000 sq. ft. that would be used for public open space), the allowable dwelling unit density for the site. As with the proposed project, residential use would be subject to Conditional Use authorization.

The *Recreation and Open Space Element* of the *San Francisco Master Plan* identifies the South of Market area as a "high need area" for public open space, and the *South of Market Plan*, an Area Plan contained within the *San Francisco Master Plan*, identifies the project site as one of two proposed large park opportunity sites in the South of Market area./1/ The 10,000 sq. ft. of publicly accessible open space included in this alternative would be in addition to private open space required for residential units by Section 135(d) of the *City Planning Code*, and could serve residents in areas adjacent to the project site.

##### IMPACTS

The building envelope of this alternative would be the same as with the proposed project. Therefore, visibility of this alternative in mid- and long-range views would be the same as with the project. Construction noise impacts for this alternative would be the same as with the proposed project, as the construction duration would be about the





SOURCE: Heller and Leake

Costco Wholesale ■

**Figure 12**  
Alternative D:  
Housing with Public Open Space

same. The potential during construction for encountering subsurface hazardous materials or cultural resources would be similar for this alternative and for the proposed project, as a similar amount of site excavation and grading would be expected.

Trip generation under this alternative would be about 2,820 weekday and Saturday vehicle trips, lower than the combined retail and residential vehicle trips identified for the project (about 6,050 weekday trips and about 6,850 Saturday trips under normal circumstances and about 8,010 weekday trips and about 9,010 Saturday trips during the peak month). Consequently, traffic and air quality effects on local intersections would be correspondingly lower under this alternative.

This alternative would provide approximately 1,075 dwelling units, about 995-1,015 more than the proposed project. Assuming no vacancies, approximately 1,720-3,010 persons would be expected to live in housing provided in this alternative, as opposed to 125-225 persons expected to be accommodated by the residential component of the proposed project. As this alternative would not contain any retail use, it would not provide the 75-85 full time jobs and 75-85 part time jobs associated with the retail component of the project.

As this alternative could result in a greater increase in residents on the site than the project, there could be an increase in demand for retail goods and business service in the project area over that expected for the project.

#### STATUS OF THIS ALTERNATIVE

This alternative has been rejected by the project sponsor because it would not further the Costco Wholesale Corporation goal of providing a Costco store in San Francisco and thus not meet the project objectives.

#### NOTE - Alternatives

/1/ San Francisco Department of City Planning, *Recreation and Open Space, an Element of the Master Plan*, July 1987, and *South of Market Plan, an Area Plan of the Master Plan*, April 1990.



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## IX. SUMMARY OF COMMENTS AND RESPONSES

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**A. INTRODUCTION**

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This document contains summaries of the public comments received on the Draft Environmental Impact Report (EIR) prepared for the proposed Costco Wholesale project, and responses to those comments. Also included are staff-initiated text changes.

All substantive comments made at the Draft EIR public hearing before the City Planning Commission on January 16, 1992, and all written comments received during the Draft EIR public review period from December 12 to January 23, 1992, are presented herein by direct quotation, edited to delete repetition and nonsubstantive material only.

Comments and responses are grouped by subject matter and are arranged by topics corresponding to the Table of Contents in the Draft EIR. Each group of comments is followed by its set of responses; the order of the responses under each topic follows the order of the comments. As the subject matter of one topic may overlap that of other topics, the reader must occasionally refer to more than one group of comments and responses to review all information on a given subject. Where this occurs, cross references are provided.

While some comments do not pertain to physical environmental issues, responses may be included to provide additional information for use by decision makers.

These comments and responses will be incorporated into the Final EIR as a new chapter. Text changes resulting from comments and responses will also be incorporated into the Final EIR, as indicated in the responses.



**B. LIST OF PERSONS COMMENTING**

---

Gary Adams, District CEQA Coordinator, California Department of Transportation  
(written comments, January 31, 1992)

Susan Bierman, Planning Commissioner (DEIR public hearing comments, January 16, 1992; and written comments, January 23, 1992)

Mary E. Burns, General Manager, San Francisco Recreation and Park Department  
(written comments, December 30, 1991)

Mr. and Ms. Michael Corban (written comments, January 12, 1992)

Vincent Courtney, Attorney, office of Davis, Reno & Courtney, Attorneys at Law  
(DEIR public hearing comments, January 16, 1992; and written comments, January 16, 1992 and January 23, 1992)

Dino DiDonato, South of Market Problem Solving Council (DEIR public hearing comments, January 16, 1992)

Rebecca Heesch, office of Davis, Reno & Courtney, Attorneys at Law (DEIR public hearing comments, January 16, 1992)

Wayne Jackson Hu, Planning Commission President (DEIR public hearing comments, January 16, 1992)

James D. Lowe, Transit Planner, San Francisco Municipal Railway (written comments, December 31, 1991)

James Morales, Planning Commissioner (DEIR public hearing comments, January 16, 1992)

Bill Price, California State Federation of Retired Union Members; president of Region 2 of the Congress of California Seniors (DEIR public hearing comments, January 16, 1992)

Edward Sewell, Planning Commissioner (DEIR public hearing comments, January 16, 1992)

## C. COMMENTS AND RESPONSES

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The Draft EIR public comment period, which began on December 12, 1991, was originally scheduled to close on January 16, 1992. At the public hearing on the Draft EIR, which was held on January 16, 1992, Vincent Courtney requested an extension of the comment period. In response to his request, the comment period was extended an additional week, and written comments were accepted through January 23, 1992.

### PROJECT APPROVAL PROCESS

#### DISCRETIONARY REVIEW

##### Comment

"... we are asking that the Commission on this project exercise its authority to have discretionary review of the project." (Vincent J. Courtney, Attorney, office of Davis, Reno & Courtney, Attorneys at Law)

"The transportation impacts of this project are enormous. So, first of all, I would think that it's important, whether or not there is a CU, that this be involved, if need be, through discretionary review, for any part of the project that goes forward. I personally find the housing an important part of what this document talks about." (Susan Bierman, Planning Commissioner)

"Just on the issue, not on the impact report, but on the merits, I guess, even though we are not here today to decide the merits, I believe, as Commissioner Bierman does, that this project seems to have been evolving as one project that contains both housing and the retail use, and I think it would be helpful for the Department and certainly for the Commission, if it decides to accept discretionary review, to take a look at all aspects of this, the use of this site. This is not something out of the ordinary. Whenever we have had controversies involving the use of one site or several sites and we knew that the permits were going to be coming in at some point in the near future, we have asked that we take a look and review the entire site, the entire use of the site at the same time.



"I think that this case warrants it, especially in light of the fact that it does appear that perhaps the housing is being promoted as a selling point for the other parts of the proposed use, the retail use. So, I think that would be sound public decision-making, to take a look at both permits when and if they come in." (James Morales, Planning Commissioner)

Response

A request for Discretionary Review of the project was filed with the Department of City Planning by the Office of Davis, Reno & Courtney, Attorneys at Law, on February 17, 1992. The decision of whether or not to take Discretionary Review of the project will be made at a regularly scheduled meeting of the City Planning Commission, after appropriate notice. If the Planning Commission were to decide to proceed with Discretionary Review of the project, the Commission would be able (from a CEQA standpoint) to approve any project falling within the parameters of the alternatives discussed in the EIR. Housing development is analyzed in the EIR. The proposed project, without housing, conforms to the *City Planning Code*. The Discretionary Review process, which is independent of the environmental review process, gives the Planning Commission the opportunity to consider issues such as appropriate land use and social and economic aspects of the proposal as related to the possible provision of housing. The Commission has its first opportunity to take approval action on the project based on its merits at the Discretionary Review public hearing.

A Conditional Use request, which would be required for affordable housing on the site, or a portion thereof, has not been filed. At such time as a hearing occurs on a Conditional Use request, all of the code-mandated criteria found in *City Planning Code* Sections 303, 803.5(f) and 817.14 regarding affordable housing in this zoning district would be considered. Following that hearing, the Commission would again have the opportunity to decide the project on its merits. -

HOUSING COMPONENT OF THE PROPOSED PROJECT

Comment

"The first comment I would make is that it's disturbing that the permit that has been asked for is just for the store. This EIR is for both. And, to me, the most attractive

part of the project with the least impacts environmentally is the housing." (Susan Bierman, Planning Commissioner)

"One thing that is triggered to me, on page 2 of the document, and I was never reassured. It seems to me this document really is about the store, with some interest, if somebody is interested in doing some housing. But to those of us who are struggling with housing issues, this document needs a lot more about that issue, or they should just separate it out if it isn't real. But I am hoping it's real." (Susan Bierman, Planning Commissioner)

"On page 107, under the housing alternative, it states very clearly that the project sponsor would like to reserve the right to consider this alternative. But all the way through, I get the impression the housing is very iffy, in which case I am not nearly as interested, and I think the support for this project is going to come from the housing.

"Now, if it's the case that Catholic Charities is dealing with the owners of the property, but not the owners, not the developers of the business, the retail, that needs to be clear in this document. From everything that has been said today, I don't get the impression that Costco is trying to develop housing. Now, maybe that is it not the case. But if they aren't developing it, if someone else owns the land, it shouldn't be in this document. I think it's put in as a selling point, but it doesn't seem real. I hope the Department, Mr. Macris, will really look serious as to whether it's real or not real. And, if so, this document ought to be rewritten simply as a retail outlet, which, of course, has its own merit, with 75 to 85 jobs full time and 75 to 85 part time. But it should go on its own merit, not -- and I am not trying to discourage the housing. I am trying to push the housing, in case that is not clear." (Susan Bierman, Planning Commissioner)

### Response

The comments are noted. The question of whether the project sponsor intends or is able to cause housing to be built on the site as compared to reserving a portion of the site as a housing opportunity site, raised also in terms of the request for discretionary review, is not a direct environmental issue. Costco proposes to reserve an approximately 410 by 55 foot site fronting Harrison Street for approximately 60 to 80 dwelling units and accompanying residential parking at



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ground level. Costco investigated this possibility at the request of Department of City Planning staff to see whether or not Costco's project could be accommodated, while at the same time, making an affordable housing site available for 60 to 80 residential units. Costco agreed to undertake an examination of the feasibility of reserving a portion of the site for housing development. As part of that commitment, a housing component was incorporated into the project and alternatives for environmental review, and Costco conducted a preliminary architectural analysis which verified the feasibility of such housing use at that location. In addition, Costco has negotiated terms under which its ground lessor will subordinate to requisite financing for the housing. Finally, as part of the certified *Costco Wholesale Hazardous Waste Site Mitigation Plan*, Costco will undertake the remediation of the entire site, including the housing opportunity site.

For some time, Costco has been in direct negotiations with Catholic Charities for its acquisition and development of the housing opportunity site. However, at this time, no potential developers of the housing have proposed to develop affordable housing on the site. The SLI zoning district in which the project would be located would allow only lower income affordable housing, which would require Conditional Use authorization. The policy issues related to housing could be explored in the hearing before the City Planning Commission, should the Commission choose to take Discretionary Review of the project.

### Comment

"Let me add, I think that, in addition, we don't think there is going to be 60 to 80 units. I don't know that there is a specific plan to produce the actual housing. It didn't sound like there was and it doesn't look like there is from the report.

"My understanding is that Costco only has a 50-year lease, and I would think that to produce affordable housing in that area, you are going to need some funding source, probably federal funds, and to get the federal funds, there is going to have to probably be more than a 50-year lease.

"In any event, I would think to qualify for those funds, you'd have to [be] a nonprofit organization, which Costco is not. I don't know of any non-profit organization in the city that is planning on building those units. That is something we'd like you to take a particularly close look at." (Vincent J. Courtney, Attorney, office of Davis, Reno & Courtney, Attorneys at Law)

Response

The comments are noted. The EIR covers all of the impacts of the proposed development with or without the housing. However, it is not the function of the EIR to conduct a housing economic feasibility analysis. Should the Commission decide to take Discretionary Review, the issues raised by the comments could be addressed within that framework.

Comment

"... two years ago we were looking at that site as a potential park site for South of Market. When we heard that Costco was considering going in, we changed our plans and began to lobby for the affordable housing proposal that had been proposed in the EIR. In fact, we have been consulting with Catholic Charities to develop those 60 to 80 units on Harrison Street and have, in fact, already reviewed a preliminary architectural plan for that housing.

"It is Catholic Charities' intention, as I understand it, to go after state funding for that development. And it also is my understanding that they are attempting to negotiate a separate agreement with the owner, in this case represented by Mr. Bernie Orsi. The land, as you probably know, is still owned by the family that had the brewery there, and his is representing their interests. So, we understand there is a hangup, a problem, with final negotiations between Catholic Charities and Mr. Orsi for that land, and so what we would be asking you to do, if there was any way to do that is to simply agree that, we feel that, first of all, this development will add to the neighborhood something in the vicinity of an estimated 250 jobs once it opens. The jobs in construction we find very attractive." (Dino Dino DiDonato, South of Market Problem Solving Council)

Response

The comments are noted. The comments are informational, do not address the content of the EIR, and no response is necessary. For information concerning the Large Park Opportunity Site located at the project site, please see the comments and responses on pp. C&R.15-17.

Comment

"I have also consulted with Catholic Charities on this issue, and apparently they have informed me they have had some difficulties in obtaining lease agreements, and also issues pertaining to financing for the housing project. I just wanted to let you know that." (Rebecca Heesch, office of Davis, Reno & Courtney, Attorneys at Law)

Response

Comment noted.

**PROJECT DESCRIPTION**

Comment

"I'd like, on page 1, if they would do a little more explaining, not a lot, but what kind of retail it is. They liken it through the document to the food retail not far from there, the Canned Goods Outlet. But I don't know myself what Costco is, so I think anyone reading the document could use a little more information.

"It's on page 50 that they talk about the Canned Foods Grocery Outlet and likens this to that. We just need more information about what their store is." (Susan Bierman, Planning Commissioner)

Response

Costco is a cash and carry wholesaler selling general merchandise, food and related products to qualified business and group members. Wholesale (business) members include various business entities which include duly licensed entities; stores licensed to purchase goods for resale; and businesses purchasing items for



consumption in their business. Group members include government employees, health care workers, certain public utilities and common carriers as well as selected employee groups.

Costco is a high-volume, low price and margin business. Its operating strategy includes carrying a wide range of nationally branded product categories but with a narrow selection within each product category and selling only the most popular brand within each category; no-frills warehouse display of merchandise; and efficient service. All sales are strictly cash and carry. Product categories include large and small appliances, hardware, food, perishables, health and beauty aids, candy, cigarettes, alcoholic beverages, soft goods, auto supplies, housewares, office supplies, books, plants, film and photo processing. Costco currently has approximately 9,000 wholesale (business) members and 22,000 group members in the city of San Francisco.

Comment

"Pages 20 and 21 have Tenth Street and Bryant Street elevations, nothing for Eleventh or for Harrison. And since Harrison is the housing, that troubled me, that it was missing." (Susan Bierman, Planning Commissioner)

Response

The EIR has assumed that the residential component of the project would be a 40' tall building along Harrison Street containing 60 to 80 affordable dwelling units above 60 to 80 residential parking spaces. While the residential component of the project has not been designed in detail, the EIR evaluates the environmental effects of a project including a residential component with these general characteristics. The Tenth Street elevation of the project shown in Figure 5 on p. 20 of the EIR depicts the general characteristics of the residential component including location, height and bulk. The facade treatment of the dwelling units, when designed in detail, would differ from what is shown in that figure. The EIR therefore does not present any detailed illustrations of the housing component. Should a development proposal for the housing opportunity site be submitted for Conditional Use consideration, the City Planning Commission would review and have jurisdiction over all aspects of the proposal, including design.

The elevations shown in the EIR are for illustrative purposes only. The developer and architects for the housing are not known at this time, and only schematic designs can be shown in the EIR.

#### Comment

"It was very hard for me in reading this document to get a handle on what it compares to in terms of size and parking. The transportation figures are really, the parking and -- the street congestion is a problem. Could they relate it, for instance, to the Sears site or some site we are familiar with as to size and as to traffic generation in the city so that we have some idea of how much bigger this is or smaller. I just couldn't get a feel for it." (Susan Bierman, Planning Commissioner)

#### Response

The proposed Costco store would contain approximately 120,000 sq. ft. of retail area and about 650 parking spaces on the approximately 203,000 sq. ft. portion of the site identified for the retail use. The former Sears store at Geary Boulevard and Masonic Avenue contained approximately 212,000 sq. ft. of retail area and about 600 parking spaces on a 300,000 sq. ft. site. For comparative purposes, the square footages of several other retail uses in San Francisco follow. The Marina Safeway is approximately 39,000 sq. ft.; the Webster Street / Geary Boulevard Safeway is approximately 48,000 sq. ft.; and the San Francisco Design Center at Ninth Street / Bryant Avenue is approximately 325,000 sq. ft.

It is not possible to accurately compare the proposed Costco project to other site-specific San Francisco based retail uses as the size of developments vary greatly. However, it is possible to place the Costco store in a probable range in terms of vehicle trip generation and parking demand when compared to other retail and commercial uses of similar size.

The proposed Costco project would be expected to generate about the same number of person trips as a Sears type retail outlet of comparable size (120,000 sq. ft.) during the afternoon peak hour of an average month, according to the *ITE Trip Generation Manual* (Land Use: 810 - Retail - General Merchandise). The estimated afternoon peak hour rate for a Sears-type retail use is 4.80 vehicle trips per 1,000 sq. ft. The trip generation rate developed for the



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proposed Costco store is discussed in detail on pp. 62-66 of the EIR. The Costco store was estimated to generate about 542 p.m. peak hour trips. A Sears store would generate approximately 576 afternoon peak hour vehicle trips in a suburban setting and fewer vehicle trips in an urban setting such as San Francisco. Transit, walk, and other modes generally account for substantial shares of person trips to a Sears-type facility, whereas with Costco, it has been assumed that all trips would be made by vehicle. Therefore, while the overall number of person trips to a 120,000 sq. ft. Costco may be about the same as the number of person trips to a 120,000 sq. ft. Sears, the number of vehicle trips to a Costco would be greater.

A supermarket of 50,000 sq. ft. would generate approximately the same number of afternoon person trips as the proposed 120,000 sq. ft. Costco use. The ITE *Trip Generation Manual* rate for a supermarket is 10.34 vehicle trips per 1,000 sq. ft. (Land Use: 850 - Supermarket). A supermarket in a suburban setting would generate an estimated 517 afternoon peak hour vehicle trips compared to the 542 vehicle trips for the Costco store. As with the previous example, the number of vehicle trips to a supermarket in an urban setting, such as San Francisco, would be less as other modes of transportation would be used more. A Costco would generate a similar number of person trips but a greater number of vehicle trips than a 50,000 sq. ft. supermarket. Parking demand would also be less at the supermarket due to more people utilizing alternate modes of transportation.

### Comment

"... it talks about the 60 to 80 affordable dwelling units, but I couldn't find in the document any description of those affordable units, what level of affordability -- 50, 80, 120 -- isn't specified, nor is the size of the units specified." (Susan Bierman, Planning Commissioner)

### Response

As stated on p. 22 of the EIR, in order to be deemed "low-income, affordable housing," the dwellings must be rented, leased or sold at rates or prices affordable to a household with an income no greater than 80 percent of the median income for households in San Francisco. At this time, no potential developers have proposed to develop affordable housing on the reserved housing opportunity site.



## **LAND USE AND ZONING**

### **LAND USE**

#### **Comment**

"We oppose this project. No. 1, they have suggested 60 to 80 units . . . they could have built in a lot more units and could have really helped the people of our city and given us more than a thousand affordable units, or at least a greater number of affordable units than they have suggested. So, we are greatly opposed to it and hope that we will be able to use that land for housing." (Bill Price, President, California State Federation of Retired Union Members; President, Region 2, Congress of California Seniors)

#### **Response**

The project analyzed in the Environmental Impact Report includes the Costco store and 60 to 80 housing units on a reserved portion of the project site. The potential environmental effects of the store and housing are described in the EIR. The EIR also describes the potential environmental effects of a number of alternatives to the proposed project, including an alternative that would consist of approximately 1,075 dwelling units and no Costco store on the site (see Alternative D, Housing with Public Open Space, on pp. 109-111 of the EIR). The EIR provides the decision-makers with information on the potential environmental effects of the project and alternatives to the project, and the City Planning Commission could approve an alternative, including the Housing with Public Open Space Alternative or the No Project Alternative, instead of the proposed project if the Commission chose to review the project and believed the alternative would be more appropriate for the site.

The SLI zoning district in which the project site is located is characterized by industrial uses generating more noise, truck traffic, dust and fumes than other SOM areas. Market rate housing is not permitted in the SLI because it is considered incompatible with such existing uses. Because lower income residents may be more tolerant of proximate industry, only lower income affordable housing could be considered in the SLI district and it requires Conditional Use authorization. The project site would need to be rezoned to

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another zoning district which allows market rate residential use as a principal permitted use in order for housing units other than lower income affordable units to be developed on the site.

### ZONING

#### Comment

"There is another confusing thing, page 22 . . . It talks about dwelling unit density in this district, SLI district, is limited to one unit per 200 square feet. Then it says the dwelling unit of housing would be approximately one unit per 325 to 435 square feet. I am not quarreling with the larger number. I would hope the units are larger, but how, if the SLI only allows 200 square foot of lot area -- I just didn't understand it and think we need to know if a conditional use would be need for variances or how that is handled." (Susan Bierman, Planning Commissioner)

"The EIR states that the size of the residential units would be restricted to one unit per 325-435 sq. ft. See, Costco Wholesale Draft Environmental Impact Report, p. 22. However, it does not specify whether these units will be studios, one bedrooms, or multiple bedroom units. As noted, the EIR is unclear and somewhat misleading as to the intention and obligation of Costco to actually provide low income housing as part of its proposed facility. Obviously, if Costco's offer is to be considered seriously, more detail and specification regarding the proposed units is required to ensure that the needs and goals of the South of Market community are met." (Vincent J. Courtney, Attorney, office of Davis, Reno & Courtney, Attorneys at Law)

#### Response

As stated on p. 22 of the EIR, the maximum dwelling unit density permitted in the SLI district would be one unit per 200 sq. ft. of lot area, or 113 units on the 22,550 sq. ft. portion of the site indicated for possible housing use. If 60 units were to be developed on the portion of the site indicated for possible housing use, the density would be about one unit per 375 sq. ft. of lot area; if 80 units were to be developed on the site, the density would be about one unit per 280 sq. ft. of lot area. Thus, residential density on the site would range from one unit per 280-375 sq. ft. of lot area rather than one unit per 325-435 sq. ft. of lot area as



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stated in the Draft EIR. In no case could the residential component of the proposed project exceed the maximum dwelling unit density of one unit per 200 sq. ft. of lot area that is allowed on the site. The density of the residential component of the project would be well within that allowed by the *City Planning Code* for this use district. In other words, there would be fewer units than allowable by Code on the site.

Actual unit size can be constrained by economic factors, allowable building area, and other factors. Allowable building area includes factors such as dwelling unit density, building height and bulk, and open space requirements. The proposed housing component of the project would not exceed the allowable dwelling unit density or height and bulk restrictions of the site. Because the developer and architects for the housing are not known at this time, nor can it be known with certainty that a request for Conditional Use authorization will be made for an affordable housing project, it is not possible to be specific about aspects of the housing such as whether the units would be studios, one-bedrooms, or multi-bedroom units. Please see the response to the following comment for information regarding Conditional Use authorization for the residential component that would be necessary in order to approve the project.

### Comment

"Page 27, I think you need an explanation that the housing would need a CU. It talks about other things, but it doesn't mention that. Again, the same 200 square foot of lot area is discussed, and I didn't understand it." (Susan Bierman, Planning Commissioner)

### Response

As stated on p. 23 of the EIR, the provision of low-income housing in the SLI district, as proposed with the project, would be subject to Conditional Use authorization. The EIR notes on p. 27 that low-income, affordable housing and group housing are the only types of residential uses that may be permitted in an SLI district. As noted in the response to the comment under "Land Use" on p. C&R.12, the SLI zoning district was not established with the intention of encouraging housing, as indicated by the fact that only affordable housing could be considered in the SLI district and would require Conditional Use

authorization. At this time, the concerns that there may be with the site for affordable family housing would logically be explored within the Discretionary Review hearing, should the Planning Commission take Discretionary Review of the project. Please refer to the response to the previous comment for information on the dwelling unit density limit of one unit per 200 sq. ft. of lot area in the SLI use district.

## LARGE PARK OPPORTUNITY SITE

### Comment

"We have had a little discussion today about the park. I didn't know the history. On page 24, it talks about [a] proposed large park opportunity site. If it's zoned or if it's marked as a proposed park site, we need to know a little more, in the document, we need to know who proposed it. Did the Department go along with it? And if so -- or Rec Park. If so, are we passing up a need problem, a solution to open space need?" (Susan Bierman, Planning Commissioner)

"It has been determined that the South of Market area is in high need of public open spaces by the *Recreation and Open Space Element* of the *San Francisco Master Plan*. Furthermore the specific site Costco has proposed for its facility has been designated to be a "large park opportunity site" by the *San Francisco Master Plan*. A park on this site would create the only large park in the western portion of the South of Market community.

"Building and maintaining a retail outlet on this site is contrary to these earlier studies which recognize and promote public park facilities for the citizens of San Francisco. The South of Market area would be much better served by the proposed park which in turn fosters the development of a healthy community environment for both residents and workers." (Vincent J. Courtney, Attorney, office of Davis, Reno & Courtney, Attorneys at Law)

### Response

The project site is identified as one of two "Large Park Opportunity Sites" in the *South of Market Plan*, an Area Plan of the *San Francisco Master Plan*. The other opportunity site is located two blocks to the northeast of the project site, on the



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southeast portion of the block bounded by Harrison Street, Folsom Street, Eighth Street and Ninth Street. Neither of these park opportunity sites are currently zoned for open space (the project site is located within the Service / Light Industrial [SLI] Use District and the other opportunity site is located within the Service / Light Industrial / Residential [SLR] Use District). Policy 4 of Objective 8 of the *South of Market Plan* states "create new parks and recreational facilities for the enjoyment by area residents, workers, and visitors." The *South of Market Plan* notes the following (p. II.10.25):

"The City should acquire a major open space/park site within the western SOM and develop it as a large soft surface and informal park with enough space for active turf sports, play areas for pre-school are children, and green landscaped spaces for teens, adults, and seniors in different social groupings. The park and park use program should be developed according to the stated preferences of residents and should complement the uses of the Sixth/Folsom Street park and recreation facility."

Recreation and Park Department staff and community sentiment (as expressed by the South of Market Problem Solving Council) currently favor acquisition of a South of Market parcel adjacent to the Bessie Carmichael School at Seventh and Harrison Streets for a park, rather than the Costco site. The Costco site is at the western edge of SOM, distant from the more residential areas of mid-SOM which would most use and benefit from a park in closer proximity. Thus, while the project would not allow for a park to be developed on the site, and could thus be considered in conflict with the SOM Plan, the conflict is apparently not of concern to Recreation and Park Department or City Planning staff given the above factors.

### Comment

"Given the limited amount of public open space in the vicinity of the project, combined with the introduction of a new residential community, the Recreation and Park Department strongly urges the dedication of a minimum of 5,000 sq. ft. of the project housing site to serve as a public park.

"The public open space should be designed to suit the needs of the future residents (such as a tot lot for children, seating and other amenities for the elderly, and disabled access) and located on a corner of the site to take advantage of sunlight and air. In addition, the development and maintenance costs should be borne by the housing developer.

"The fact that the nearest public recreation centers and playgrounds are not located within walking distance of the proposed residential development makes it unlikely that the future residents will be able to use them, particularly children and the elderly. Since many affordable housing residents include families and the elderly, it is important that the project include adequate public open space to meet their recreational needs." (Mary E. Burns, San Francisco Recreation and Park Department)

### Response

The portion of the project site designated for the residential component is approximately 22,550 sq. ft. The maximum dwelling unit density allowable in the SLI district would be one unit per 200 sq. ft. of lot area, or a maximum of 113 units on the possible residential area of the site. Sixty to eighty units are discussed for the residential component. A 5,000 sq. ft. park on the site of the residential component would reduce the amount of area available for housing. With a 5,000 sq. ft. smaller area for housing, the proposed number of units would need to be decreased in order to maintain their proposed size, or the proposed size of the units would need to be decreased in order to maintain the proposed number of units.

The EIR analyzes potential environmental effects of an alternative to the project that would consist of approximately 1,075 dwelling units and 10,000 sq. ft. of publicly accessible open space on the project site. This alternative would not contain the Costco store or its parking lot (See Alternative D, Housing with Public Open Space, on pp. 109-111 of the EIR). The open space in this alternative would be in addition to private open space required for residential units on the site by Section 135(d) of the *City Planning Code*. While the 10,000 sq. ft. of open space would be intended to primarily serve residents that would occupy the site under this alternative, it could also serve residents in areas adjacent to the project site.

The EIR provides the decision-makers with information on the potential environmental effects of this and other alternatives to the project, and the City Planning Commission could approve an alternative instead of the proposed project if the Commission believed the alternative would be more appropriate for the site.



## **TRANSPORTATION**

### **CUMULATIVE CONTEXT**

#### **Comment**

"On page 62, it talks about freeway demolition, freeway road replacement, and some Bay Bridge information. And it's all pretty iffy and negative. It seems to me it might be helpful if in the EIR's we start talking about what is planned in the way of roadway. We as this Commission have been shown plans for the Embarcadero replacement for quite a long time, which involves both the Muni Metro extension, and it involves the E Line going north from Market Street, both of which are meant to solve some problems. They are in the planning stage, but it seems there could be some information about that so that at least it shows a little attempt by the city to solve the problem." (Susan Bierman, Planning Commissioner)

#### **Response**

The Waterfront Transportation Program has been defined to extend from Mission Bay to Fisherman's Wharf. The Program has many facets and is intended to improve traffic safety, extend rail transit service, and enhance pedestrian access to the waterfront. The Waterfront Transportation Program has the following principal components:

- I-280 freeway touchdown ramps constructed at Fifth Street / King Street with existing ramps at Sixth Street / Brannan Street to remain - this work to be performed by Caltrans;
- construction of King Street through Mission Bay connecting I-280 to The Embarcadero;
- reconstruction of The Embarcadero from King Street to North Point Street;
- construction of the MUNI Metro Turnback;
- construction of the MUNI Metro Extension to Mission Bay;
- construction of the F-Embarcadero Extension from the foot of Market Street to Fisherman's Wharf.

The Embarcadero and King Street would each be designed with medians for transit service. The Embarcadero would include an attractive, continuous, waterside pedestrian promenade. The Waterfront Transportation Program has

been segmented into several phases. Construction south of Folsom Street will begin in mid-1992 and is scheduled for completion in mid-1994. Construction north of Broadway is scheduled to start in mid-1992 and be completed in mid-1994. The mid-Embarcadero segment between Folsom and Broadway is about to begin preliminary design and environmental review. A definitive construction schedule has not been established, but this segment is expected to be completed by 1996. Progress on construction of King Boulevard is dependent upon Caltrans' schedule for the I-280 ramp. King Street construction is scheduled to begin in 1993 and end in mid-1994.

The MUNI Metro Turnback will allow the capacity of the MUNI Metro subway to be increased and improve the reliability and cost-effectiveness of Metro subway operations by relieving the existing bottleneck at the Embarcadero station. A subway tunnel will be extended east and south of the existing Embarcadero station, coming to grade in an Embarcadero median portal between Howard and Folsom Streets. Construction is scheduled for 1992 to 1995.

Extension of the MUNI Metro beyond the turnback into Mission Bay will expand MUNI's light rail system by nearly two miles and incorporate four new stops. An at-grade, double-track exclusive transit-way is proposed, beginning in the median of the new Embarcadero and continuing within the median of King Boulevard. Construction is scheduled for 1993 to 1994 for service to Fourth and King only. Final extension to Sixteenth Street, serving parts of Potrero Hill and Mission Bay, will be built in the mid-1990's.

The F-line historic streetcar service will consist of two principal segments: Market Street between Castro Street and the Transbay Terminal; and extension to the foot of Market Street and along The Embarcadero into Fisherman's Wharf. Market Street construction east of Eleventh Street has already been completed. Construction west to Castro will proceed in two phases between 1992 and 1994. Service from Castro and Market to the Transbay Terminal is scheduled to begin in January 1995. Construction of the F-line to the foot of Market Street, along The Embarcadero, and into Fisherman's Wharf is scheduled to occur from 1994 to 1996, with service starting in January 1997. Its schedule is linked to the Central Embarcadero project.



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The cumulative transportation analysis for the proposed Costco project is derived from the analysis for the greater downtown area contained in the Mission Bay Final EIR, which takes these transportation improvements into account. Even though these projects may improve transit accessibility to the Costco project site, the Costco EIR analysis conservatively assumes no customer use of transit and assigns all customer trips as vehicle trips.

### Comment

"... it again hits one particularly in South of Market, where the freeways, where the streets are terribly impacted at peak time, when they read the 2000, Year 2000 figures, when you read 2000 and then you read the projections to 2020 ... Because the way we are planning, it's going to be pretty bad. And that is something the city has to keep looking at. You keep hearing rumbles of business community not liking Prop M and not liking controls, and no one should lose sight of these documents, because these documents, these EIR's really do tell the story, if nobody else tells the story. They really certainly tell why this department and the public, going even further, put controls on downtown development. It wasn't a whim. It wasn't a joke. It was real figures of housing impacts and of shadows and sunlight lost, but essentially terrible transportation and traffic problems. . ." (Susan Bierman, Planning Commissioner)

### Response

Comment noted.

### Comment

"I was confused ... but where it talks about the degrading of level service from C to D, D to E, and in some places E to F, maybe the distinction -- I know it talks about some of it going to level of service F, which -- and E, both of which are unacceptable.

"If it is not acceptable, it says here level of service E represents capacity and is not within the acceptable level of service range. F is worse. And if it isn't acceptable, how then do we approve a project of this size? And would you give us some information on that. There is much less impact from the housing than from the store. And if the traffic impacts that I think go to Level F are that great for this area, maybe there should be a smaller store and more housing. I just think it bears some more discussion.

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"This level of service D and E. There is one table, I don't know what page, that doesn't seem to show Level F. And in the text, it does talk about Level F. Now, maybe that is the cumulative figure and maybe from this it only goes to Level E. But it isn't really clear." (Susan Bierman, Planning Commissioner)

### Response

Impacts of the project were assessed for five local intersections in the vicinity of the project site, for the weekday p.m. peak hour and the Saturday peak hour, for both an average month and the peak month (during the Christmas season). As shown in Table 6 on p. 70 of the EIR, during the Saturday peak hour none of the intersections would be substantially affected by project-generated traffic with the exception of Eleventh / Harrison Streets which would operate at LOS A/B during the peak month. During the Saturday peak hour, operations at all five study intersections would operate satisfactorily for average month and peak month conditions, as well as in the Year 2000.

As shown in Table 5 on p. 69 of the EIR, all of the study intersections currently operate satisfactorily (LOS D or better) during the p.m. peak hour. Project-generated traffic would affect the LOS at two of the study intersections during an average month and at three intersections during the peak month. Intersection operations at Eleventh / Harrison Streets would degrade from LOS C to LOS D during an average month, and to LOS E during the peak month. As noted on p. 67 of the EIR, LOS E represents capacity and is not within the acceptable LOS range, and this is considered a significant effect. Intersection operations at Tenth / Harrison Streets would be affected by project-generated traffic, but would remain in the acceptable LOS range.

With cumulative development, in the Year 2000 during the p.m. peak hour, the intersection of Eleventh / Harrison Streets would operate at LOS F, which represents a jammed condition in which traffic demand exceeds capacity. Traffic operations at Tenth Street / Bryant Street, serving the freeway on-ramp nearest the project site, would operate at LOS E. Operations at the other three study intersections would decline but would continue to operate satisfactorily (LOS D or better). As noted on p. 69 of the EIR, the localized aspects of cumulative development on streets and intersections were analyzed using underlying



growth factors. It is estimated through this method that traffic at intersections in the vicinity of the project site will increase by ten percent by the Year 2000. The proposed project is assumed to be contained within these underlying growth factors, and therefore these Year 2000 levels of service are expected to occur regardless of whether or not this specific project is approved. As noted in the first mitigation measure under "Measures That Could Be Implemented By Public Agencies" on p. 98 of the EIR, a separate left-turn lane in the westbound direction at the intersection of Eleventh / Harrison Streets would facilitate operating conditions of LOS D/E (borderline unacceptable) at this intersection during Year 2000 conditions.

As noted on p. 103 of the EIR, traffic increases resulting from the proposed project would cause the p.m. peak hour level of service at the intersection of Eleventh and Harrison Streets to decline from LOS C to LOS D during the average month (which would not be considered a significant impact), and to further decline to LOS E during the peak month (which would be considered a significant impact).

Regarding the comment on approval of the project, the characterization of intersection LOS as "unacceptable" was intended to refer to poor or jammed operating conditions. Such conditions (LOS E or F) are normally considered less than acceptable in urban areas. San Francisco Office of Environmental Review policy and practice define a project-related decline in LOS to E or F as constituting a significant environmental effect. Nothing in CEQA is intended to prevent decision makers from approving a project despite significant environmental effects (nor disapproval of a project with or without significant environmental effects). CEQA Guidelines Section 15002(h) states that decision-makers have a number of methods at their disposal for protecting the environment. An EIR does not by itself control the way in which a project can be built or carried out. Rather, when an EIR shows that a project would cause significant impacts, the decision-making agency must respond to the information in one or more of the following ways: (1) changing the proposed project; (2) imposing conditions of approval on the project; (3) adopting plans or ordinances to control a broader class of projects to avoid the impacts; (4) choosing an alternative way of meeting the same need; (5) disapproving the project; (6) finding that changing or altering the project to mitigate the impact is

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infeasible; (7) finding that the unavoidable impact is acceptable, as described below, per CEQA Guidelines Section 15093.

CEQA Guidelines Section 15043 states that a public agency may approve a project even though the project would cause a significant effect on the environment if the agency makes a fully informed and publicly disclosed decision that (a) there is no feasible way to lessen or avoid the significant effect and (b) specifically identified expected benefits from the project outweigh the policy of reducing or avoiding significant environmental impacts of the project. As noted in CEQA Guidelines Section 15093, the decision-makers must balance the benefits of a proposed project against its unavoidable environmental effects in determining whether or not to approve the project. If the decision-makers conclude that the benefits of a proposed project outweigh the identified unavoidable adverse environmental effects, a statement of overriding considerations citing the specific reasons why the project benefits outweigh its identified significant effects would be prepared, and the project could be approved.

### TRANSPORTATION ANALYSIS / APPROACH

#### Comment

"The report makes certain assumptions based on projections of increased transportation, either highway improvements or public transportation, et cetera. And I wonder if there maybe isn't an inappropriate relationship to these areas, given the unique kind of retailer that Costco is, for example . . . it's pretty tough to imagine that average Price Club shopper to take public transportation to cart away a lot of the stuff that the average person takes out of the Price Club.

"And, obviously, in the city, people will cut the cloth to fit the shoe. However, I think if we are talking about a very similar product, to assume that public transportation and some plans that may or may not actually happen are going to mitigate what is generally a very intense driver use might be a little shortsighted." (Edward Sewell, Planning Commissioner)

"The nature of Costco's business does not promote, or lend itself to the promotion of, the utilization of public transportation. Shopping at Costco for bulk items would be



nearly impossible if shoppers were to attempt to carry these bulk items home on the bus. Attempts to mitigate this problem with additional public transit lines in the vicinity of Costco would not be effective as Costco's customers will not utilize public transportation. Thus, increased traffic is inevitable if the Costco project is approved. Along with the increased traffic problem comes increased air pollution and increased noise levels for the people who reside and work in the South of Market area."

(Vincent J. Courtney, Attorney, office of Davis, Reno & Courtney, Attorneys at Law)

Response

It should be noted that the EIR notes on pp. 66, 67 and 71 that the transportation analysis assumes that no Costco customers are expected to use public transit. All analysis of trip generation in the EIR assumes that each Costco customer would drive alone to the project site. The only potential transit use considered is that which would be generated by employees of Costco and occupants of the residential component of the proposed project.

The EIR contains analyses of potential air quality and noise effects of the project (pp. 77-82 and 82-86 of the EIR, respectively). These analyses are based on potential transportation impacts of the project and are also based on the assumption that each Costco customer would drive alone to the project site.

Comment

"Then I guess maybe there is one other question, . . . trying to determine what the market share is. I assume Costco has analyzed their market share. I assume that demand by San Francisco in this region might be measured by the total number of members that are at Price Club and Costco, in both, or at least the San Francisco members that had San Francisco addresses might be measured by that, but -- to make some assumptions on what their market for San Francisco might be in relationship to parking and trip generation rather than taking averages of the stores that are there."

(Wayne Jackson Hu, Planning Commission President)

Response

Due to its proposed location in San Francisco, there could be more customers to a San Francisco Costco store than there are currently Costco and Price Club

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customers with San Francisco addresses. Costco currently has approximately 9,000 wholesale (business) members and 22,000 group members in the city of San Francisco. Table 3 on p. 64 of the EIR presents a summary of weekday p.m. peak hour and Saturday peak hour traffic based on cash register activity at Costco's eight San Francisco region stores during the pre-Christmas peak in 1988. The trip generation used in the EIR assumes that a San Francisco-based Costco store would attract customers at a rate above the Bay Area Region average, due to higher population density. In order to present a conservative scenario for the proposed San Francisco store, Santa Rosa Costco store trip generation data (the region's highest) was used to calculate potential vehicle trip generation for an average and peak month. It was further assumed that all Costco customers would arrive by automobile, as would be expected for a bulk-merchandise type store. Therefore, the analysis contained in the EIR presents a reasonable, conservative scenario of potential transportation impacts of the project.

### Comment

"In this document, they don't have the usual transit photographs that show the crowding of transit vehicles in the future as well as right now. I was just curious what EIR's do we put those in and what EIR's do we not put them in. Maybe it's that the transit vehicles in this area aren't that badly impacted . . ." (Susan Bierman, Planning Commissioner)

### Response

On noted on p. 66 of the EIR, for purposes of analyzing traffic impacts of the project, it was assumed that all Costco customers would arrive by automobile, as would be expected for a bulk-merchandise retail store. Thus, because the potential effects of the project on MUNI would be so minimal, the photographs of peak loading conditions on MUNI have not been included in the EIR for this project.

### Comment

"Staff would however, recommend participation in the 'Commuter Check' program offered by several bay area organizations including SF Muni. This regional transit



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voucher program is a RTA/MTC funded project. It is a convenient way for employers to provide a tax-deductable benefit to their employees and support transit." (James D. Lowe, Transit Planner, San Francisco Municipal Railway)

### Response

Comment noted. The Commuter Check program allows employers to subsidize employee use of public transportation. Through this program, employers may give employees twenty dollars per month in tax-free transit vouchers that can be redeemed toward any transit ticket or pass purchase of twenty dollars or more on any transit system in the Bay Area. This is one of several systems to encourage transit and carpool/vanpool use by commuters. RIDES is another. Planning Department staff do not generally recommend any specific individual programs but do always encourage incentives to transit use.

### Comment

"South of Market traffic congestion would increase significantly with the opening of a Costco outlet. It has been determined by the City and County of San Francisco, Department of City Planning, that daily traffic to Costco would increase traffic in the area by approximately 5,840 to 6,050 cars per day during the week. Traffic during Saturday would increase by approximately 6,640 to 6,850 cars per day. During December, these levels would again increase by approximately 7,800 to 8,010 car trips per day during the week, and to approximately 8,800 to 9,010 per day during Saturdays. See, Costco Wholesale Draft Environmental Impact Report, pp. 63, 65, 111.

"The designated site for this project lies South of Market and runs parallel to the Bay Bridge, I-280, and U.S. 101 corridor. Freeway on-ramps leading on to the freeway lie at Bryant and 8th Streets, and at Bryant and 10th Streets directly across from the proposed site. The close proximity of the proposed site to freeway on-ramps will create severe traffic congestion especially during the already congested afternoon commute hours.

"Access from the freeway to the Civic Center, to the Golden Gate Bridge, and other areas in the vicinity has been reduced by the demolition of the Franklin Street exit and the Gough Street exit due to the 1989 earthquake damage suffered. This has had an impact on local street traffic in general through the South of Market area. Costco's

proposed facility will again add to the already congested traffic situation of the area." (Vincent J. Courtney, Attorney, office of Davis, Reno & Courtney, Attorneys at Law)

Response

As noted on p. 63 of the EIR, retail-related trip generation for the proposed project would be about 5,840 weekday trips and about 6,640 Saturday trips under normal circumstances and about 7,800 weekday trips and about 8,800 Saturday trips during the peak month. Residential-related trip generation would be about 210 weekday and Saturday vehicle trips.

The EIR includes an analysis of traffic operations at the freeway on-ramp nearest the project site (the intersection of Tenth Street and Bryant Street) and a discussion of project effects on freeway corridors serving downtown San Francisco. As noted on p. 71 of the EIR, the intersection of Tenth Street and Bryant Street currently operates at LOS C and B on weekdays and Saturdays, respectively. The addition of project traffic would not affect these levels of service during an average month or the peak month. The EIR further notes on p. 71 that while the project would contribute to increases in traffic on the major freeways serving downtown San Francisco, traffic generated by the project would increase total traffic on major freeways during the p.m. peak hour by less than 0.5%. Such increases would not be measurable against the day-to-day fluctuations in traffic volumes.

The EIR notes on p. 55 that while many downtown streets and intersections have experienced changes in traffic volumes as a result of the closure of freeway segments damaged in the Loma Prieta earthquake of October 1989, most of them are expected to be only temporary. As freeway repairs are completed, traffic is expected to return to its pre-quake patterns. Because not all repair plans have been finalized, it has been necessary to make certain assumptions about the transportation system that would be in place by the year 2000 to provide a reasonable assessment of future conditions. These assumptions are presented on pp. 55-56 of the EIR.

Comment

"A project of this magnitude, and its close proximity to State Route 101, will have significant traffic impacts on local streets, the Bryant Street On-Ramp, and the



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mainline facility. The trip generation rates used are reasonable. However, how the generated trips are distributed should be addressed. The study should present Average Daily Traffic (ADT), AM & PM peak hour traffic volumes on diagrams for local streets and State Route 101 in the vicinity of this project under the following conditions: 1. Existing; 2. Year 2000 without this project; 3. Year 2000 with this project; and 4. Year 2000 with this project, plus cumulative projects." (Gary Adams, District CEQA Coordinator, California Department of Transportation)

### Response

The weekday p.m. peak period (4:00 p.m. to 6:00 p.m.) and the Saturday peak period (12:30 p.m. to 3:30 p.m.) were chosen to determine existing peak-hour levels of service based on the following considerations. During weekday conditions, Costco related traffic would be highest during the midday period, however overall traffic volumes would be much higher during the p.m. peak hour selected for analysis. The a.m. peak period was not analyzed because the Costco store would not be open during this period. For weekend conditions, the existing traffic volumes are relatively light, while the project traffic volumes would be heavy. The appropriate analysis for weekend conditions would be expected to coincide with the project's peak traffic generation (12:30 p.m. to 3:30 p.m.).

Traffic conditions and impacts are discussed on pp. 67-71 of the EIR and intersection levels of service are presented in Table 5 for the weekday p.m. peak hour analysis and Table 6 for the Saturday peak hour analysis. Existing, existing plus project and Year 2000 conditions are presented. San Francisco's *Guidelines for Environmental Review: Transportation Impacts* requires that these scenarios be analyzed. The Year 2000 scenario assumes cumulative growth and the project to be part of that cumulative growth. The project's percentage of cumulative growth is shown in both Tables 5 and 6 for weekday and Saturday respectively.

The scope of the traffic study did not include a full analysis of Average Daily Traffic (ADT) volumes. ADT volumes for existing conditions are summarized in Table C&R-1. It should be noted that ADT volumes at some locations have been estimated based on the relationship of p.m. peak hour trips to daily trips in the area, and that ADT counts are not available for the mainline U.S. 101 or I-80

TABLE C&amp;R-1: EXISTING AVERAGE DAILY TRAFFIC (ADT) VOLUMES

LOCAL STREETS

Harrison Street westbound between Ninth and Tenth Streets	14,981 daily vehicles/a/
Bryant Street eastbound between Ninth and Tenth Streets	7,244 daily vehicles
Ninth Street northbound between Harrison and Bryant Streets	25,744 daily vehicles/a/
Tenth Street southbound between Harrison and Bryant Streets	28,038 daily vehicles/a/

FREEWAY RAMPS

I-80 Seventh/Harrison Streets westbound off-ramp	9,773 daily vehicles
I-80 Eighth/Bryant Streets eastbound on-ramp	10,201 daily vehicles
U.S. 101 Ninth/Bryant Streets northbound off-ramp	14,282 daily vehicles/a/
U.S. 101 Tenth/Bryant Streets southbound off-ramp	17,871 daily vehicles/a/

MAINLINE

U.S. 101 at its interchange with I-80	167,000 daily vehicles/b/
I-80 at its interchange with U.S. 101	256,000 daily vehicles/b/

/a/ ADT volumes estimated based on the relationship of p.m. peak hour trips to daily trips in the area.

/b/ Estimated; Caltrans' (1990 *Traffic Volumes on California State Highways*) extrapolations from counts at other locations.

SOURCE: Wilbur Smith Associates



freeway facilities. The values supplied for the mainline volumes are Caltrans' (1990 *Traffic Volumes on California State Highways*) extrapolations from counts at other locations and should be viewed as estimates, not as fact. Based on the San Francisco County Transportation Authority's report entitled *City and County of San Francisco Congestion Management Program* (October 1991), both U.S. 101 and I-80 function at LOS F in the downtown area of San Francisco for weekday peak period conditions. This indicated the facilities are congested and have average speeds of less than 30 miles per hour. While precise freeway speed and delay data is not available for weekend conditions, observation indicates that intermittent LOS F conditions exist on these freeways on weekends even when surface streets are free-flowing.

The project would add an estimated 6,644 average month weekday and 8,600 peak month weekday daily and 624 average month weekday and 796 peak month weekday p.m. peak hour vehicle trips to the surrounding roadways. During an average month this would represent a six percent and five percent increase in traffic at the Ninth/Bryant Streets off-ramp and Tenth/Bryant Streets on-ramp respectively. The increase to U.S. 101 mainline volumes is estimated at one percent. During the peak month, the increases are estimated at eight percent and seven percent for the Ninth/Bryant Street off-ramp and Tenth/Bryant Streets on-ramp respectively and at one percent for the U.S. 101 mainline. The project is not expected to heavily impact I-80 because few trips would be traveling to or from the East Bay because there are already Costco stores in several East Bay cities. The project's impact on the Seventh/Harrison Streets off-ramp, Eighth/Bryant Streets on-ramp and I-80 mainline volumes would not be significant.

### PARKING

#### Comment

"I was looking at the . . . trip generation tables and so forth. And one of the things that might be missing, . . . I guess in relationship to similar facilities, whether it be Costco and Price Club, the amount of parking that they have for those facilities. One of the concerns here is, . . . based on trip generation, there seems to be adequate parking, or at least calculations assume there is adequate parking.

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"The concern . . . when there is not available parking, the amount of circulating by cars trying to find parking spaces . . . In the Costco facility, I guess in [South San Francisco], they are in a large shopping center and I guess there is overflow. I guess they consume more of that parking, whereas in the Price Club, there seems to be an insufficient amount of parking spaces at times and not enough spaces to take the overflow. So, I don't know how to measure that . . . maybe one way is to look at the actual number of parking spaces based on the size of the facilities. So, if the information is available, . . . maybe that could be responded to. But I don't believe it's in this report." (Wayne Jackson Hu, Planning Commission President)

### Response

The Costco project analyzed in the EIR includes a total of 720 retail-serving parking spaces, and the parking analysis on pp. 71-74 of the EIR was based on the provision of that number of parking spaces. The project application that has been submitted to the Department of City Planning is most similar to Alternative C to the project, which is analyzed on pp. 107-109 of the EIR. This alternative would include a total of 650 retail-serving parking spaces. The parking impacts of this alternative are addressed on p. 108 of the EIR. That parking analysis is expanded below to address concerns raised in the comment for both the project analyzed in the EIR (provision of 720 parking spaces), Alternative C to the project (provision of 650 parking spaces), and a possible future increased parking option (provision of 890 spaces) as noted on pp. 1, 16, and 73 of the EIR.

Parking demand and the surplus/deficit under four conditions (average month weekday, average month Saturday, peak month weekday, and peak month Saturday) for the project, Alternative C and the increased parking option are shown in Table C&R-2. An efficiency factor of 90% has been applied to the number of parking spaces provided with the project under all three scenarios. In the analysis of parking conditions in relatively high-volume garages, the parking supply is often discounted by a five to ten percent efficiency factor to account for practical impediments to full utilization of a high-volume, high-turnover parking facility. This is particularly true for retail parking with high turnover, and for relatively large facilities where empty spaces on the upper floors are difficult



TABLE C&amp;R-2: ESTIMATED PARKING SURPLUS / DEFICIT

Period	Peak Parking Demand	PROJECT: 720 Parking Spaces		ALTERNATIVE C: 650 Parking Spaces		INCREASED PARKING OPTION: 890 Parking Spaces	
		Effective Supply/a/	Surplus/ (Deficit)	Effective Supply/a/	Surplus/ (Deficit)	Effective Supply/a/	Surplus/ (Deficit)
Average Month Weekday	510	650	140	585	75	800	290
Average Month Saturday	625	650	25	585	(40)	800	175
Peak Month Weekday	645	650	5	585	(60)	800	155
Peak Month Saturday	790	650	(140)	585	(205)	800	10

/a/ Effective supply represents actual parking supply multiplied by an efficiency factor of 90%.

SOURCE: Wilbur Smith Associates, based on statistics supplied by Costco Wholesale Corporation.

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to access. The application of this efficiency factor yields an effective parking supply of about 650 parking spaces for a 720-space project, about 585 effective spaces for the 650-space garage associated with Alternative C, and about 800 effective spaces for a project with 890 spaces.

As shown in Table C&R-2, for the project analyzed in the EIR, based on an effective parking supply of about 650 parking spaces, there would be an estimated 140 space surplus for an average month weekday, a surplus of about 25 spaces for an average month Saturday, a surplus of about 5 spaces for a peak month weekday, and a deficit of about 140 spaces for a peak month Saturday. For Alternative C analyzed in the EIR, based on an effective supply of about 585 parking spaces, there would be an estimated 75 space surplus under average month weekday conditions, a deficit of about 40 spaces under average month Saturday conditions, a deficit of about 60 spaces under peak month weekday conditions, and a deficit of about 205 spaces under peak month Saturday conditions. For the increased parking option, based on an effective supply of about 800 spaces, there would be an estimated 290 space surplus under average month weekday conditions, a surplus of about 175 spaces under average month Saturday conditions, a surplus of about 155 spaces under peak month weekday conditions, and a surplus of about 10 spaces under peak month Saturday conditions.

During weekday conditions, on-street facilities in the project area are operating at effective capacity (more than 90% occupied) during the midday peak period. Spillover from Costco would be forced to compete for these parking spaces and would impact parking conditions in the area. For the project proposal that resembles Alternative C (provision of 650 parking spaces), weekday spillover is estimated at 60 spaces during the peak month. Spillover would result in queues forming at the access points to the project, and circling activities as vehicles wait for parking spaces within or adjacent to the project to vacate.

During weekend and holiday periods, on-street parking in the area of the project is estimated at 55% occupied indicating that an estimated 825 on-street spaces are available in the study area (see discussion on pp. A.37-A.42 of the EIR). For the project analyzed in the EIR (provision of 720 spaces), a deficit of about 80 parking spaces could be accommodated within one block of the project site,



should shoppers choose to park on-street. For the project proposal that resembles Alternative C (provision of 650 spaces), the Saturday deficit of about 205 spaces would exceed the number of on-street spaces in the immediate area of the project and some Costco patrons would likely park up to two blocks from the site, wait within the parking lot for spaces to become available, or queue on Tenth and Eleventh Streets to enter the parking lot. This condition would prevail for weekends between Thanksgiving and New Year's as well as for other relatively heavy shopping weekends scattered throughout the year. The queuing and circling activities described under weekday peak month Alternative C conditions would also occur during weekend conditions when parking demand exceeded capacity, and could contribute to short-term, temporary reductions in area intersection LOS.

During peak month weekday and peak month Saturday conditions, when parking demand would exceed the sum of on-site supply and on-street supply on adjacent blocks, the resulting parking spillover would impact parking conditions at existing uses in the area. On-street parking adjacent to the Costco would be full and patrons of other businesses in the area, who compete for on-street parking spaces during existing weekday conditions and park with little difficulty during existing Saturday conditions, would be forced to share the existing supply with Costco patrons.

The above-described parking deficits and resultant off-site queuing and traffic disruption would not constitute a significant environmental impact due to its small size (in the case of average Saturdays and peak weekdays) and limited times of year (in the case of greater parking deficits on peak shopping weekends).

The last paragraph on p. 72 of the EIR, through the first six lines on p. 73 of the EIR, is replaced by the following text:

"The proposed project would include a total of 720 parking spaces in a three-level parking structure on the site. The parking structure would be designed so that a fourth level of parking could be added at a later date (unspecified at this time), so that there could be a total of approximately 890 parking spaces within applicable height and bulk limits of the site. Parking demand and the surplus/deficit under four conditions (average month weekday, average month Saturday, peak month weekday, and peak month Saturday) for the project (provision of 720 parking spaces) and for the potential increased parking option (provision of 890 parking spaces) are shown in Table 7. An efficiency factor of 90% has been applied to the

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number of parking spaces provided with the project under both scenarios. In the analysis of parking conditions in relatively high-volume garages, the parking supply is often discounted by a five to ten percent efficiency factor to account for practical impediments to full utilization of a high-volume, high-turnover parking facility. This is particularly true for retail parking with high turnover, and for relatively large facilities where empty spaces on the upper floors are difficult to access. The application of this efficiency factor yields an effective parking supply of about 650 parking spaces for a 720-space project and about 800 effective spaces for the increased parking option with 890 spaces.

"As shown in Table 7, for the proposed project, based on an effective parking supply of about 650 parking spaces, there would be an estimated 140 space surplus for an average month weekday, a surplus of about 25 spaces for an average month Saturday, a surplus of about 5 spaces for a peak month weekday, and a deficit of about 140 spaces for a peak month Saturday. For the increased parking option, based on an effective supply of about 800 spaces, there would be an estimated 290 space surplus under average month weekday conditions, a surplus of about 175 spaces under average month Saturday conditions, a surplus of about 155 spaces under peak month weekday conditions, and a surplus of about 10 spaces under peak month Saturday conditions. For the proposed project, parking demand would exceed on-site supply during peak month Saturday conditions; for the increased parking option parking demand would not exceed supply under any of the four analyzed conditions.

"During weekend and holiday periods, on-street parking in the area of the project is estimated at 55% occupied indicating that an estimated 825 on-street spaces are available in the study area. For the proposed project (provision of 720 spaces), a deficit of about 80 parking spaces could be accommodated within one block of the project site, should shoppers choose to park on-street. Further parking deficit would likely cause some Costco patrons to park up to two blocks from the site, wait within the parking lot for spaces to become available, or queue on Tenth and Eleventh Streets to enter the parking lot. This condition would prevail for weekends between Thanksgiving and New Year's as well as for other relatively heavy shopping weekends scattered throughout the year, and could contribute to short-term, temporary reductions in area intersection LOS. The above-described parking deficit for the proposed project (provision of 720 spaces) and resultant off-site queuing and traffic disruption would not constitute a significant environmental impact, due the limited times of year when parking demand would exceed on-site supply."

The estimated parking surplus and deficit for the project and for the increased parking option appears in revised Table 7, which replaces Table 7 on p. 72 of the EIR.

The first five sentences of the last paragraph on p. 108 of the EIR are replaced by the following text:



TABLE 7: ESTIMATED PARKING SURPLUS / DEFICIT

Period	Peak Parking Demand	PROJECT: 720 Parking Spaces		INCREASED PARKING OPTION: 890 Parking Spaces	
		Effective Supply/a/	Surplus/ (Deficit)	Effective Supply/a/	Surplus/ (Deficit)
Average Month Weekday	510	650	140	800	290
Average Month Saturday	625	650	25	800	175
Peak Month Weekday	645	650	5	800	155
Peak Month Saturday	790	650	(140)	800	10

/a/ Effective supply represents actual parking supply multiplied by an efficiency factor of 90%.

SOURCE: Wilbur Smith Associates, based on statistics supplied by Costco Wholesale Corporation.

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"The proposed parking supply of 650 spaces for the retail component of the project would yield an effective parking supply of about 585 effective spaces after application of the 90% efficiency factor described on pp. 72-73 of the EIR. Based on an effective supply of about 585 parking spaces, there would be an estimated surplus of 75 parking spaces under average month weekday conditions, a deficit of about 40 spaces under average month Saturday conditions, a deficit of about 60 spaces under peak month weekday conditions, and a deficit of about 205 spaces under peak month Saturday conditions.

"During weekday conditions, on-street facilities in the project area are operating at effective capacity (more than 90% occupied) during the midday peak period. Spillover from Costco would be forced to compete for these parking spaces and would impact parking conditions in the area. The estimated weekday spillover of 60 spaces would likely result in queues forming at the access points to the project, and circling activities as vehicles wait for parking spaces within or adjacent to the project to vacate.

"During weekend and holiday periods, on-street parking in the area of the project is estimated at 55% occupied indicating that an estimated 825 on-street spaces are available in the study area. The estimated Saturday deficit of about 205 spaces would exceed the number of on-street spaces in the immediate area of the project and some Costco patrons would likely park up to two blocks from the site, wait within the parking lot for spaces to become available, or queue on Tenth and Eleventh Streets to enter the parking lot. This condition would prevail for weekends between Thanksgiving and New Year's as well as for other relatively heavy shopping weekends scattered throughout the year. The queuing and circling activities described above could contribute to short-term, temporary reductions in area intersection LOS.

"During peak month weekday and peak month Saturday conditions, when parking demand would exceed the sum of on-site supply and on-street supply on adjacent blocks, the resulting parking spillover would impact parking conditions at existing uses in the area. On-street parking adjacent to the Costco would be full and patrons of other businesses in the area, who compete for on-street parking spaces during existing weekday conditions and park with little difficulty during existing Saturday conditions, would be forced to share the existing supply with Costco patrons.

"The above-described parking deficits and resultant off-site queuing and traffic disruption would not constitute a significant environmental impact due to its small size (in the case of average Saturdays and peak weekdays) and limited times of year (in the case of greater parking deficits on peak shopping weekends)."

### Comment

"With the increased traffic generated by the Costco facility comes an increased need for parking in the site area. Costco has proposed a parking facility on the site to accommodate approximately 650 parking spaces for the outlet and approximately sixty to eighty spaces for the residential units.



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"To accommodate all Costco customer parking needs, the rate at which parking space turn over must occur is approximately nine vehicles per space per day, not taking into account the parking utilized by employees. In an eight hour span, this breaks down to less than one hour per shopper to prevent spill-over parking onto the adjacent streets. An even faster turn over rate would be required during peak hours and peak months to prevent spill-over parking onto the streets.

"Commuter traffic would be further snarled by slow moving traffic searching for on-street parking. Customers of existing small businesses in the vicinity will be required to compete for on-street parking which could further affect patronage to such businesses. These parking problems are compounded by the fact that the bulk types of products Costco promotes admittedly requires driving to the facility." (Vincent J. Courtney, Attorney, office of Davis, Reno & Courtney, Attorneys at Law)

### Response

Please see the response to the previous comment. As shown in Table C&R-2 on p. C&R.32, parking spillover would occur during average month Saturday, peak month weekday, and peak month Saturday conditions for Alternative C to the project, which is currently the preferred project. As stated in the previous response, the spillover would result in queues forming at the driveways as customers wait for on-site parking spaces to vacate, and circling of the block would also occur as customers search for on-street parking in the area. During Saturday conditions, the spillover could be accommodated on-street although it would necessitate walks of up to three blocks during the peak month. During peak month weekday conditions, when on-street parking in the area is effectively full, spillover would be forced to compete for on-street parking or to wait within the parking lot for other vehicles to leave. During these periods, when parking demand would exceed supply, spillover onto adjacent streets would impact parking conditions at existing uses in the area as on-street parking would be filled on those block faces which provide the easiest access to the Costco store. A measure to lessen this impact would be to provide more on-site parking for the Costco store.

In regards to the question of duration of stay for Costco customers, an average duration of one hour was assumed for the analysis of parking conditions. This number is consistent with parking data from other Costco stores.

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### Comment

"One of the points we are concerned about that I don't see addressed in the EIR is the use of the parking facility late at night. We are concerned that the area has, as you know, a very, very high density of bars and clubs and restaurants that draw probably something in the vicinity of between three and 5,000 people on any given weekend to that particular neighborhood. At the moment, they use that site or a portion of that site for parking. This is really pretty much a bridge and tunnel crowd. They do arrive in cars, and so we are urging the developer to allow the parking lot to be used late at night, until 2:00 o'clock in the morning, for patrons of the clubs in that neighborhood so we can get keep them off the residential streets in the immediate vicinity.

"That is an issue there. We two years ago have thought we resolved that parking issue by having the B of A keep their parking lot open on Eleventh and Market, but B of A has since closed that option, so we see this as a way to resolve that, so we would like to see that included in any agreement between you and the developer." (Dino DiDonato, South of Market Problem Solving Council)

### Response

Page 98 of the EIR notes that the following mitigation measure is under consideration by the project sponsor:

"The project sponsor could make formal arrangements for the shared use of project parking by employees of the Social Services Department located across Harrison Street during weekdays and by club patrons in the project vicinity during the evenings."

If this mitigation measure were to be adopted, it would require the provision by Costco or some other entity of security lights and security guards within the garage and insurance coverage for such use.

## **AIR QUALITY**

### Comment

"The EIR has determined that the traffic congestion generated by the proposed Costco facility, and the fact that this could cause violations of emission standards with



## IX. Summary of Comments and Responses

concomitant health effects, are significant environmental effects that cannot be avoided if the project is implemented. See, Costco Wholesale Draft Environmental Impact Report, p. 103." (Vincent J. Courtney, Attorney, office of Davis, Reno & Courtney, Attorneys at Law)

### Response

As noted on pp. 103 of the EIR, it has been determined that cumulative development in the South of Market area and resultant cumulative traffic increases could cause violations of the emission standards for fine particulate matter in San Francisco, with concomitant health effects. The EIR further notes that the proposed project (like all potential projects in the South of Market and elsewhere) would contribute to but not by itself cause this cumulative effect.

## **HAZARDOUS MATERIALS**

### Comment

"On the Environmental Impact Report, the one comment I have relates to the fact that the site seems to have some toxic contamination. And based upon the samples that were done, apparently there has been a site remediation plan that has been developed. There is sort of a general outline of what that plan provides for on page 101, but I would like a little more detail in the responses to these documents about that plan. In particular, in light of the fact that, as we heard testimony, and I can attest to this from personal observation, that there are a large number of people who visit that area on a nightly basis. And I wonder if the site remediation plan incorporates sufficient notice and protection of that large number of people that would be using sites around that area.

"I think what would be helpful -- these are wonderful documents. However, I don't think I have the level of expertise in chemical analysis to fully understand them. So, I would like, as I suggested, sort of an outline or summary of the points that I suggested, how the public will be protected and what exactly will be going on in terms of the remediation." (James Morales, Planning Commissioner)

"The EIR has noted that various toxic and hazardous wastes have been found on the proposed Costco site which began being used for industrial purposes prior to the turn

of the century. See, Costco Wholesale Draft Environmental Impact Report, pp. 40-48. Additionally, there are at least fifteen potential sources of toxic contamination in the vicinity of the South of Market site. See, Costco Wholesale Draft Environmental Impact Report, pp. A51-A52. Further information is necessary to properly assess the extent of the existing toxic waste material and the potential for seepage onto the site from the surrounding area.

"The EIR makes clear that landfill space for hazardous waste throughout the country is limited and that effective and environmentally acceptable hazardous waste treatment technologies have yet to be developed. See, Costco Wholesale Draft Environmental Impact Report, pp. 93-94. However, the EIR does not specify what methods will be utilized to properly and safely dispose of any toxic or hazardous waste, and has to ensure adherence to state and federal laws regulating such waste." (Vincent J. Courtney, Attorney, office of Davis, Reno & Courtney, Attorneys at Law)

Response

The following paragraph is added after the first paragraph on p. 93 of the EIR:

"The remediation plan for the project site has been reviewed by an independent consultant. The consultant has certified that if the remediation measures are carried out as described, then health, safety, and environmental risks will be mitigated. The remediation plan, titled *Costco Wholesale Hazardous Waste Site Mitigation Plan*<sup>/7/</sup>, is summarized and cited in the EIR on pp. 40, 47, 101, and 102, and is on file and available for review at the Office of Environmental Review, Department of City Planning, 450 McAllister Street, San Francisco."

The following footnote is added to p. 94 of the EIR:

<sup>/7/</sup> The remediation plan, titled *Costco Wholesale Hazardous Waste Site Mitigation Plan*, prepared by Environmental Science Associates, Inc. in October 1991 and reviewed and certified by Levine-Fricke in November 1991, is on file at the Office of Environmental Review, Department of City Planning, 450 McAllister Street, San Francisco."

The remediation plan describes measures that would be implemented to protect the health and safety of workers and passers-by at the site during remediation; provisions for supplementary soil testing and analysis for the contaminants of concern; procedures that would be followed during remediation; and provisions for the safe and proper disposal of hazardous soil.



## IX. Summary of Comments and Responses

As described on p. 102 of the EIR, the remediation plan includes a site specific Health and Safety Plan, which is required to protect worker health and to minimize threats to public health and the environment that could result from the handling of hazardous soil (see also EIR Appendix E, p. A.48). A site safety plan is a comprehensive planning document that provides project background information, an explanation of site conditions, and measures to mitigate potential health and safety concerns, including provisions for OSHA training for all persons working at the site. The site safety plan is included as Appendix B to the remediation plan.

The site is currently fenced and would continue to be fenced during soil sampling and remediation activities. In order to protect worker and public health and safety, the remediation plan also describes procedures that would be followed during remediation, including a dust control program; provisions for stockpiling, covering, and testing excavation soil; safe and proper disposal of hazardous soil; and verification testing of soil substrate. These steps are intended to protect the health and safety of both those building the facility and the public working or travelling nearby during construction in addition to protection for future users of the site.

The remediation plan provides for the collection of soil samples spaced in a grid pattern across the site, and the analysis of the samples for the contaminants of concern. Additional samples would be collected and tested in areas found to be contaminated. Excavated soil that is found to be uncontaminated would be removed from the property. Contaminated soils would be isolated on the site and undergo further testing to determine their chemical characteristics. Several disposal options are available for disposal of contaminated soils, depending on the types and levels of contaminants present. For soils that contain chemical concentrations that exceed hazardous waste regulatory thresholds, the primary disposal option would be shipment to a Class I (hazardous waste) disposal site. Contaminated soil would be transported under a California Hazardous Waste Manifest that provides extensive documentation for each load sent to a Class I facility. For soils with chemical concentrations that do not exceed hazardous waste regulatory thresholds, "designated waste" classifications are possible that would allow disposal at landfills other than Class I. Soils classified as "designated waste" could be moved as clean fill, but could be disposed of in regulated landfills. All soils sent off-site as "designated waste" would require a Non-hazardous Manifest. At the completion of remediation, all hazardous wastes

identified in the excavation area would be relocated and properly disposed, and any hazardous wastes that might remain in the underlying soils would be encapsulated on the site, under building foundations or pavement.

There is no evidence that contaminants have seeped onto the site from the surrounding area. However, should that have occurred, the soil sampling would detect it and the remediation plan would address it.

As noted by the commenter, and noted on p. 93 of the EIR, landfill space for hazardous waste is relatively limited. Excavated materials from the project site disposed of in hazardous waste landfills would decrease the total capacity available in the United States to receive such waste.

## **EMPLOYMENT**

### **Comment**

"We are asking the developer to complete an agreement with Mission Hiring Hall, South of Market Employment Center, for brokering the jobs that will be available there, both construction and post construction." (Dino DiDonato, South of Market Problem Solving Council)

"Page 7 has some discussion of the number of jobs, 75 to 85, with no indication about their interest in working with the community. It now sounds as though they have talked with Mission Hiring Hall, or perhaps they have talked with South of Market Council. But I think it ought to allude to that. It doesn't even say they will reach out to the neighborhood for hiring, so that should be dealt with." (Susan Bierman, Planning Commissioner)

"Costco will have an immediate negative effect on a wide range of established small businesses in the area. A grocery store, or hardware store alone on this site would not offer the vast array of goods that Costco does, and thus, would not pose such a threat to the established businesses in the South of Market area. Larger companies, such as Safeway for example, will also be adversely affected by the decline in patronage.

"Furthermore, a significant number of established businesses throughout San Francisco will be negatively affected as customers will travel from all areas of the



## IX. Summary of Comments and Responses

City to purchase all their needs at Costco in one stop. This could severely impact the employment rate in the City and add to the threat of loss of employment and possibly homelessness for a great number of employees in San Francisco, and especially in the South of Market area.

"As it stands now, Costco proposes to offer approximately seventy-five to eighty-five full time positions and approximately seventy-five to eighty-five part time positions. The number of San Franciscans who will face the threat of losing their job due to this proposed facility could easily outnumber these projections. The closure of existing South of Market businesses will destroy the economic diversity of the community which has been established and stable for many years. Future opportunities for residential ownership of small businesses, such as those which now exist, will decline dramatically. The nature of Costco's business makes it virtually impossible for a small neighborhood business to compete.

"The EIR makes no mention of where Costco proposes to recruit employees, whether they will make efforts to hire residents of the South of Market area or even whether they will make efforts to hire San Franciscans. Nor is there any information furnished as to the wage rates, working conditions, or employment benefits contemplated for these prospective employees." (Vincent J. Courtney, Attorney, office of Davis, Reno & Courtney, Attorneys at Law)

### Response

These comments do not address the content of the EIR, but are noted here for informational purposes. Comments pertaining to the potential for the proposed project to result in the loss of jobs, the closure of businesses in the South of Market area, and an increase in homelessness are not supported by any evidence presented and address economic and social concerns rather than environmental concerns. Economic and social effects of projects are not necessarily required for environmental review under CEQA, per CEQA Guidelines Section 15131. Impacts that are too speculative for evaluation are excluded from environmental review per CEQA Guidelines Section 15145.

As stated in the EIR, the project would create approximately 75-85 full time and 75-85 part time jobs. Ensuring that a portion of those jobs would be held by San Francisco residents is a policy decision that would be addressed by the

decision-makers and the project sponsor. CEQA requires that the EIR identify potential physical effects of the given project. Determining appropriate hiring practices is not a potential physical impact. As such, an analysis of hiring practices is not included in the EIR.

The proposed Costco store would provide goods and services to San Francisco residents, including some of those living South of Market. The present estimated 31,000 San Francisco Costco members now shop at Costco stores outside of the City. The South of Market area currently contains a variety of businesses, including auto repair, print shops, nightclubs, restaurants, some neighborhood-serving retail uses such as convenience stores; city-serving retail uses such as larger specialty stores; and businesses serving the region, such as furniture showrooms. The EIR notes that most trips to the proposed project are expected to originate in San Francisco, as several other Costco stores exist in the Bay Area. The extent to which the proposed Costco store might pose competition to other businesses in San Francisco, including small businesses in the South of Market area, is not known. However, because Costco's expected patronage would be from the city as a whole (and not just from South of Market), any project effects on existing businesses would most likely be dispersed throughout the city. As noted above, such effects are not expected to result in physical changes to the environment, and are therefore not analyzed in the EIR.

## **ECONOMICS**

### **Comment**

"Our present financial conditions dictates that we travel to San Mateo County and seek the lowest prices available for consumer items, i.e. Costco and Price Club. Building a Costco in San Francisco will allow us to shop where we live, and the sale tax revenue will remain in this county." (Mr. and Ms. Michael Corban)

### **Response**

Comment noted.



**D. STAFF-INITIATED TEXT CHANGES**

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The following sentence is added at the end of the second paragraph on p. 7 of the EIR:

"It is public policy that any underground storage tanks that are under sidewalks on the perimeter of the project be removed."

The second mitigation measure under "Measures That Could Be Implemented By Public Agencies" on p. 9 and p. 98 of the EIR is revised as follows (revisions are underlined):

"Coordinate work schedules of Pacific Gas and Electric Company and other utilities requiring trenching, so that street disruption would take place during weekends and off-peak hours. This should be done through the San Francisco Committee for Utility Liaison on Construction and Other Projects (CULCOP). In-street utilities should be installed at the same time as the street is opened for construction of the project to minimize street disruption. It is public policy that any underground storage tanks that are under sidewalks on the perimeter of the project be removed."

The fourth full paragraph on p. 38 of the EIR is revised as follows (revisions are underlined):

"At the federal level, the primary laws governing hazardous wastes and hazardous substances are the Resource Conservation and Recovery Act of 1976 (RCRA), and the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA). Generally, these laws require that responsible parties report any known hazardous waste contamination of soil or groundwater to the U.S. EPA."

The last sentence on p. 38 of the EIR, which continues onto p. 39 of the EIR, is revised as follows (revisions are underlined):

"The Department of Toxic Substances Control of the California Environmental Protection Agency enforces state hazardous waste regulations in California, independently of the Federal EPA, which enforces federal hazardous waste regulations."

## IX. Summary of Comments and Responses

The last sentence of the first partial paragraph on p. 39 of the EIR is revised as follows (revisions are underlined):

"A copy of each manifest must be filed with the Department of Toxic Substances Control."

The second sentence of the first full paragraph on p. 39 of the EIR is revised as follows (revisions are underlined):

"Clean-up standards employed by the RWQCB can be more stringent than those used by EPA or the Department of Toxic Substances Control."

The second sentence of the second paragraph on p. A.46 of the EIR is revised as follows (deletions are bracketed and revisions are underlined):

"The primary federal hazardous [materials and] waste and hazardous substance laws are contained in the Resource Conservation and Recovery Act of 1976 (RCRA), and in the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA)."

The first sentence of the third paragraph on p. A.46 of the EIR is revised as follows (revisions are underlined):

"Federal regulations pertaining to hazardous substances and wastes are contained in the *Code of Federal Regulations* (40 CFR)."

The first paragraph on p. A.47 of the EIR is revised as follows (revisions are underlined):

"There are two separate hazardous waste programs on a statewide level in California, one by the U.S. EPA and one by the California EPA. The Department of Toxic Substances Control within the California Environmental Protection Agency is the agency empowered to enforce state hazardous materials and waste regulations in California, independent of the U.S. EPA."

The second sentence of the second paragraph on p. A.47 of the EIR is revised as follows (deletions are bracketed):

"For example, the California Hazardous Waste Control Law, the state equivalent of RCRA, contains a much broader definition of hazardous [materials and] waste."



## IX. Summary of Comments and Responses

The text of the EIR is revised throughout to reflect that off-street parking over 650 spaces would be possible as a permitted use under a special provision in the Service/Light Industrial district (hereinafter SLI). The Draft EIR indicated that additional parking would require a conditional use authorization. The maximum number of parking spaces that could be accommodated in the currently proposed parking structure is 671. However, an unlimited quantity of "community commercial parking" may be provided in the SLI District without conditional use authorization, so long as the requirements of *City Planning Code* Section 817.28 are met. This procedural option was not discussed in the DEIR. The EIR does cover the effects of providing up to 890 spaces as part of the Costco project. The option of providing additional spaces without a CU procedure does not change that analysis and does not represent a significant revision to the DEIR.

It is stated throughout the DEIR that any parking provided that would exceed the required (434 spaces) plus accessory parking (217 spaces) as allowed by *City Planning Code* Section 151 (Parking Requirements - Retail Uses), and Section 204.5 (Parking and Loading as Accessory Uses), would require conditional use approval by the City Planning Commission. This would be true only if the parking were to be used solely by Costco employees and customers. However, if parking should be provided according to Section 817.28, community commercial parking spaces are a permitted use. Thus, Costco may provide an unspecified additional number of parking spaces, "if available for use by the operators, employees, clients and/or visitors of a permitted, or approved conditional, nonresidential use in the vicinity." These spaces may be in a garage or on an open lot.

To include all options available for the provision of parking, staff is recommending that there be changes in the text of the Final EIR on pages 1, 2, 3, 4, 10, 11, 16, 22, 23, 29, 52, 73, 74, 105, 107, and 108, to include reference to the provisions of Section 817.28 of the *City Planning Code*. In all appropriate places, the Final EIR would have language inserted that makes clear that according to the provisions of *City Planning Code* Section 817.28, additional parking could be provided as a principal permitted use if available for use by the operators, employees, clients, and/or visitors of a permitted, or approved conditional, non-residential use in the vicinity. Specifically, the following revisions are made to the EIR:

The following text is deleted from the EIR: the second to last sentence on p. 1; the last sentence of the first partial paragraph on p. 12; the last sentence of the first full

paragraph on p. 12; the first full sentence on p. 52; the last sentence on p. 108; and the last sentence of the third paragraph on p. 109.

The first sentence of the third paragraph on p. 2 of the EIR is revised as follows (revisions are underlined):

"Retail-serving parking in excess of 651 spaces (434 required spaces and 217 accessory spaces) could be provided as a principal permitted use if available for use by the operators, employees, clients, and/or visitors of a permitted, or approved conditional, non-residential use in the vicinity, per Section 817.28 of the City Planning Code."

The first sentence on p. 3 of the EIR is revised as follows (deletions are bracketed):

"The project would require Conditional Use authorization [for retail-serving parking use in excess of 651 spaces (434 required spaces and 217 accessory spaces) and] for residential use in the SLI district."

The first sentence of the last paragraph on p. 3 of the EIR is revised as follows (deletions are bracketed and revisions are underlined):

"The project would remove approximately 130 short-term and long-term parking spaces and would provide about 720 retail-serving spaces ([if approved,] an additional 170 spaces could be provided at a later date) and 60 to 80 residential-serving parking spaces. Retail-serving parking in excess of 651 spaces (434 required spaces and 217 accessory spaces) could be provided as a principal permitted use if available for use by the operators, employees, clients, and/or visitors of a permitted, or approved conditional, non-residential use in the vicinity, per Section 817.28 of the City Planning Code."

The first full sentence on p. 4 of the EIR is revised as follows (revisions are underlined):

"At the later date when Costco could expand the parking garage, peak parking demand would be met by the proposed 890 retail spaces."

The third and fourth sentences of the second paragraph on p. 10 of the EIR, and the third and fourth sentences of the second paragraph on p. 105 are revised as follows (deletions are bracketed and revisions are underlined):

"As with the proposed project, an additional 170 parking spaces could be constructed at a later date [if approved by the City Planning Commission]. As



with the proposed project, parking in excess of 651 spaces (434 required spaces and 217 accessory spaces) could be provided as a principal permitted use if available for use by the operators, employees, clients, and/or visitors of a permitted, or approved conditional, non-residential use in the vicinity, per Section 817.28 of the City Planning Code."

The fifth and sixth sentences of the first paragraph on p. 11 of the EIR, and the sixth and seventh sentences of the last paragraph on p. 107 are revised as follows (deletions are bracketed and revisions are underlined):

"As with the proposed project, an additional parking level (containing about 150 parking spaces for this alternative) could be constructed at a later date [if approved by the City Planning Commission]. Such additional parking, in excess of 651 spaces (434 required spaces and 217 accessory spaces), could be provided as a principal permitted use if available for use by the operators, employees, clients, and/or visitors of a permitted, or approved conditional, non-residential use in the vicinity, per Section 817.28 of the City Planning Code."

The following sentence replaces footnote /a/ in Table 1 on p. 16 of the EIR; the last partial sentence on p. 16 which continues to p. 22; the last two sentences of the first partial paragraph on p. 52; and the last partial sentence on p. 73 continuing though the first full sentence on p. 74:

"Retail-serving parking in excess of 651 spaces (434 required spaces and 217 accessory spaces) could be provided as a principal permitted use if available for use by the operators, employees, clients, and/or visitors of a permitted, or approved conditional, non-residential use in the vicinity, per Section 817.28 of the *City Planning Code*."

The first sentence of the first full paragraph on p. 23 is revised as follows (deletions are bracketed and revisions are underlined):

"[Parking for retail use in excess of 651 spaces (434 required spaces and 217 accessory spaces) and] The inclusion of low-income housing in the SLI district would be subject to Conditional Use authorization."

The second to last sentence of the first paragraph on p. 29 of the EIR is revised as follows (revisions are underlined):

"Parking beyond this amount could be provided as a principal permitted use if available for use by the operators, employees, clients, and/or visitors of a permitted, or approved conditional, non-residential use in the vicinity, per Section 817.28 of the City Planning Code."

The second sentence of the second to last paragraph on p. 94 of the EIR is replaced by the following sentence:

"An additional 170 retail-serving parking spaces could be added to the site at a later date."

The third sentence of the first paragraph of the response on p. C&R.31 is revised as follows (deletions are bracketed):

"This alternative would include a total of 650 retail-serving parking spaces [such that no Conditional Use authorization for excess parking would be necessary]."

Finally, the title of Alternative C, which appears on pp. iii, 11 and 107 of the EIR, is revised to be "Alternative C: Reduced Parking."



X. ADDENDUM TO THE DEIR



City and County of San Francisco  
Department of City Planning

450 McAllister Street  
San Francisco, CA 94102

ADMINISTRATION  
(415) 558-6414  
CITY PLANNING COMMISSION  
(415) 558-6414  
PLANS AND PROGRAMS  
(415) 558-6264  
IMPLEMENTATION / ZONING  
(415) 558-6377

MEMORANDUM

DATE: April 9, 1992  
TO: City Planning Commission  
FROM: Lucian Blazej, Planning Director  
RE: Costco Wholesale FEIR Certification  
STAFF CONTACT: Sharon A. Rogers, Planner III  
REVIEWED BY: Paul Deutsch, Planner IV  
RECOMMENDATIONS: The following suggested staff-initiated text changes should be added to the Comments and Responses Document. Following your review and approval of these changes, staff recommends adoption of the attached draft motion certifying the Final EIR.

DISCUSSION OF STAFF-INITIATED TEXT CHANGES:

Add the following to the summary of Comments and Responses Staff initiated-text changes section that begins on page C&R.46 (these comments would be inserted as C&R48):

The text of the FEIR is revised throughout to reflect that off-street parking over 650 spaces is possible as a permitted use under a special provision in the Service/Light Industrial district (hereinafter SLI). The Draft EIR indicated that additional parking would require a conditional use authorization. The maximum number of parking spaces that can be accommodated in the currently proposed parking structure is 671. However, an unlimited quantity of "community commercial parking" may be provided in the SLI District without conditional use authorization, so long as the requirements of Code Section 817.28 are met. This procedural option was not discussed in the DEIR. The EIR does cover the effects of providing up to 890 spaces as part of the Costco project. The option of providing additional spaces without a CU procedure does not change that analysis and does not represent a significant revision to the DEIR.

It is stated throughout the DEIR that any parking provided that would exceed the required (434 spaces) plus accessory parking (217 spaces) as allowed by City Planning Code Section 151 (Parking Requirements - Retail Uses), and Section 204.5 (Parking and Loading as Accessory Uses), would require conditional use approval by the Planning Commission. This would be true only if the parking is used solely by Costco employees and customers. However, if parking should be provided according to Section 817.28, community commercial parking spaces are a permitted use. Thus, Costco may provide an unspecified additional number of parking spaces, "if available for use by the operators, employees, clients and/or visitors of a permitted, or approved conditional, nonresidential use in the vicinity". These spaces may be in a garage or on an open lot.

To include all options available for the provision of parking, staff is recommending that there be changes in the text of the Final EIR on pages 1, 2, 3, 4, 10, 11, 16, 22, 23, 29, 52, 73,

City Planning Commission  
Costco Certification of FEIR  
April 9, 1992  
page 2

74,105, 107, and 108, to include reference to the Section 817.28 City Planning Commission provisions. In all appropriate places, the Final EIR would have language inserted that makes clear that, according to the provisions of City Planning Code Section 817.28:

Additional parking could be provided as a principal permitted use if available for use by the operators, employees, clients, and/or visitors of a permitted, or approved conditional, non-residential use in the vicinity.



## **XI. APPENDICES**

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APPENDIX A: Initial Study

APPENDIX B: Transportation

APPENDIX C: Air Quality

APPENDIX D: Typical Noise Levels

APPENDIX E: Hazardous Materials

## APPENDIX A: INITIAL STUDY

**NOTICE THAT AN  
ENVIRONMENTAL IMPACT REPORT  
IS DETERMINED TO BE REQUIRED**

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**Date of this Notice:** September 20, 1990

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**Lead Agency:** City and County of San Francisco, Department of City Planning  
450 McAllister Street, 6th Floor, San Francisco, CA 94102

**Agency Contact Person:** Diane Oshima

**Telephone:** (415) 558-6253

**Project Title:** Costco Wholesale  
89.469E

**Project Sponsor:** Costco Wholesale  
**Contact Person:** Jeff Brotman  
**Telephone:** (206) 828-8100

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**Project Address:** 454-470 Tenth Street

**Assessor's Block and Lots:** Block 3524, Lots 18, 24, 32, 63, 64, 65

**City and County:** San Francisco

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**Project Description:** Construction of a 40 foot tall mixed-use development containing retail and residential uses. The retail component would contain approximately 120,000 sq. ft. of retail space, 2,500 sq. ft. of loading area, 332,880 sq. ft. of parking (about 960 spaces) and 480 sq. ft. of open space. The residential component would consist of 60 to 80 affordable dwelling units and 60 to 80 residential parking spaces. Conditional Use authorization would be required for residential use and for retail-serving parking in excess of 150 percent of required retail parking. The project would replace an existing parking lot and would not require the demolition of any existing structures.

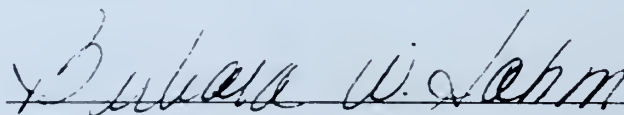
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THIS PROJECT MAY HAVE A SIGNIFICANT EFFECT ON THE ENVIRONMENT AND AN ENVIRONMENTAL IMPACT REPORT IS REQUIRED. This determination is based upon the criteria of the Guidelines of the State Secretary for Resources, Sections 15063 (Initial Study), 15064 (Determining Significant Effect), and 15065 (Mandatory Findings of Significance), and the following reasons, as documented in the Environmental Evaluation (Initial Study) for the project, which is attached.

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**Deadline for Filing an Appeal of this Determination to the City Planning Commission:**  
October 1, 1990.

**An appeal requires:** 1) a letter specifying the grounds for appeal, and;  
2) a \$75.00 filing fee.



BARBARA W. SAHM, Environmental Review Officer

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ER5 6/85



COSTCO WHOLESALE  
INITIAL STUDY  
89.469E

**I. PROJECT DESCRIPTION**

The project site is bounded by Tenth, Eleventh, Harrison and Bryant Streets on Lots 18, 24, 32, 63, 64 and 65 of Assessor's Block 3524 (See Figure 1). The site is located five blocks south of Market Street adjacent to the U.S. 101 Freeway. The U.S. 101 on-ramp is across the street from the project site at the southeast corner of Tenth and Bryant Streets, and the South Van Ness off-ramp overpass borders the project site at the corner of Eleventh and Bryant Streets. The 225,500 square foot (sq. ft.) site is currently developed with a paved surface parking lot divided into approximately 115 short-term and long-term parking spaces and a storage lot for approximately 800 city-towed vehicles. The only structure existing on the site is a chain link fence, which surrounds the property and divides the parking uses.

The proposed project would consist of two major components: a Costco Wholesale store and a residential complex (See Figure 2). Each would have its own associated off-street parking. The retail component of the project, located on the southern portion of the site (along Bryant Street) would contain approximately 196,760 sq. ft. of parking (about 540 spaces) at ground level. The Costco Wholesale store, consisting of approximately 120,000 sq. ft. of retail space and 2,500 sq. ft. of loading area, would be elevated approximately eight feet above ground level on a podium along with an additional 68,060 sq. ft. of parking (about 210 spaces). A partial third level over the podium would also contain 68,060 sq. ft. of parking (about 210 spaces). There would be a total of approximately 960 off-street parking spaces (subject to Conditional Use authorization from the City Planning Commission) serving the retail use including customer, employee and accessory parking. Approximately 480 sq. ft. of open space containing benches, trees, ground cover and art work would be located along Tenth Street adjacent to the building entry.

The residential component of the project, located on the northern portion of the site (along Harrison Street) would be a 40 foot tall building containing 60 to 80 dwelling units above 60 to 80 residential parking spaces at ground level.

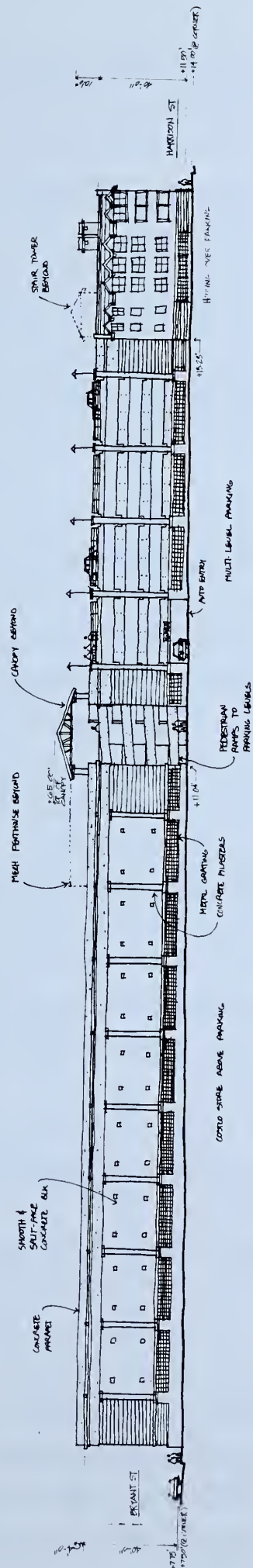


SOURCE: Environmental Science Associates, Inc.

Costco Wholesale ■

**Figure 1**  
Project Location





SOURCE: Heller and Leake

Costco Wholesale ■  
**Figure 2**  
Tenth Street Elevation

As there are currently no buildings on the project site, the project would not require the demolition of any existing structures.

The site is in the SLI (Service / Light Industrial) Use District and the 40-X Height and Bulk District. Retail uses are a principal permitted use in the SLI district. The permitted floor area ratio (FAR) for commercial use in the SLI Use District is 2.5:1 (FAR is the ratio of gross floor area of buildings on a site to the size of the lot). The FAR of the retail component of the project would be about 0.53. Parking for the retail use in excess of 660 spaces (440 required spaces and 220 accessory spaces) would be subject to Conditional Use authorization.

Dwelling unit density would be limited to one unit per 200 sq. ft. of lot area in the SLI district; the dwelling unit density of the residential component of the proposed project would be approximately one unit per 325-435 sq. ft. of lot area or 60 to 80 low-income, affordable dwelling units on the project site. Low-income, affordable housing and group housing are the only types of residential uses permitted in an SLI district, subject to Conditional Use authorization. In order to be deemed "low-income, affordable housing," the dwellings must be rented, leased or sold at rates or prices affordable to a household with an income no greater than 80 percent of the median income for households in San Francisco. The residential portion of the project would be either sold or ground-leased by the project sponsor and could be operated by a separate owner in the future.

Project construction would take about 10-15 months; total construction cost would be about \$7,500,000 (1989 dollars). The project sponsor is Costco Wholesale, Inc.; the project architect is Heller & Leake.

## II. SUMMARY OF POTENTIAL ENVIRONMENTAL EFFECTS

### A. EFFECTS FOUND TO BE POTENTIALLY SIGNIFICANT

The Costco Wholesale project is examined in this Initial Study to identify potential effects on the environment. The cumulative impacts of growth in the South of Market area were analyzed in the South of Market Plan and Mission Bay EIRs. Information contained in these area-wide EIRs will be summarized and incorporated by reference in the Costco Wholesale EIR as appropriate. Some project-specific potential effects have been determined to be potentially significant, and will be analyzed in an Environmental Impact



Report (EIR). They include: land use; project-related transportation analysis; construction noise; traffic-generated air quality effects; seismic and geologic issues; and cultural resources. For informational purposes, the relationship of the project to the Master Plan (including the South of Market Plan) and the City Planning Code also will be presented in the EIR.

## B. EFFECTS FOUND NOT TO BE SIGNIFICANT

The following potential impacts were determined either to be insignificant or to be mitigated through measures included in the project. These items require no further environmental analysis in the EIR:

Visual Quality: The proposed project would be compatible with existing development in the project vicinity. No existing structures would be demolished for project construction, and the project would be reviewed by the Department of City Planning and the City Planning Commission for consistency with applicable policies of the Urban Design Element of the San Francisco Master Plan.

Glare: Mirrored glass would not be used.

Population and Housing: The proposed project would not displace any existing housing. The residential component of the project would include 60 to 80 dwelling units. The retail component of the project would generate 75 to 85 full time jobs and 75 to 85 part time jobs. Cumulative and indirect effects, including those of the project, are addressed in the Mission Bay and South of Market Plan EIRs.

Operational Noise: After completion, building operation and project-related traffic would not perceptibly increase noise levels in the site vicinity. Operational noise would be regulated by the San Francisco Noise Ordinance and the project would conform to the Noise Guidelines of the Environmental Protection Element of the Master Plan. A mitigation measure supporting noise reduction measures is included as part of the project (see mitigation measure on p. 29).

Construction Air Quality: Project construction would have short-term impacts on air quality in the site vicinity. Mitigation measures to reduce particulate and hydrocarbon emissions generated during construction are included as part of the project (see p. 29).

Shadow and Wind: The height of the proposed project would conform to the 40-foot height limit for this district. The proposed project would not be expected to significantly alter the shadow or wind environment of the project vicinity.

Utilities/Public Services: The proposed project would contribute to the cumulative demand for public utilities and services in the South of Market area. Such impacts anticipated from cumulative downtown development were analyzed in the South of Market Plan EIR and no significant impacts were identified.

Biology: The project site is completely developed; therefore, the project would not affect vegetation or wildlife.

Water: The site is completely covered by impervious surfaces; therefore, the project would not affect drainage patterns or water quality. Measures to mitigate potential impacts associated with excavation and dewatering are included as part of the project (see, p. 29).

Energy/Natural Resources: The project would be designed to comply with performance standards of Title 24 of the California Code of Regulations. Its annual energy budget would be about 74,000 Btu per sq. ft. Peak electrical energy and natural gas use would coincide with PG&E's systemwide peaks. Cumulative and indirect effects, including those of the project, are addressed in the EIR prepared for the South of Market Plan.

### III. ENVIRONMENTAL CHECKLIST AND DISCUSSION

A. COMPATIBILITY WITH EXISTING ZONES AND PLANS	Not Applicable	Discussed
1) Discuss any variances, special authorizations, or changes proposed to the City	—	<u>X</u>
* 2) Discuss any conflicts with any adopted environmental plans and goals of the City or Region, if applicable.	<u>X</u>	—

The proposed project would comply with the bulk and height requirements of the City Planning Code for this zoning district. Under the Code, the proposed retail use would be a

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\*Derived from State EIR Guidelines, Appendix G, normally significant effect.



principal permitted use. Conditional Use authorization for the proposed residential use and excess retail parking would be required. The relationship of the proposed project to the policies of the Master Plan, including the South of Market Plan, and provisions of the City Planning Code, will be discussed in the EIR. The project would not conflict with other adopted plans and goals; however, issues related to compatibility with zoning and plans will be discussed in the EIR.

## B. ENVIRONMENTAL EFFECTS

1) <u>Land Use</u> . Could the project:	<u>Yes</u>	<u>No</u>	<u>Discussed</u>
*(a) Disrupt or divide the physical arrangement of an established community?	—	<u>X</u>	<u>X</u>
*(b) Have any substantial impact upon the existing character of the vicinity?	—	<u>X</u>	<u>X</u>

The proposed project site is located south of Market Street, in the SLI (Service / Light Industrial) District as set forth in the South of Market zoning controls. The City Planning Code was amended by Ordinance No. 115-90 on March 5, 1990 to incorporate the South of Market zoning controls. The proposed project would constitute an increase in the intensity of the existing land use on the site and in the surrounding area. Land use and zoning issues will be discussed in the EIR.

2) <u>Visual Quality</u> . Could the project:	<u>Yes</u>	<u>No</u>	<u>Discussed</u>
*(a) Have a substantial, demonstrable negative aesthetic effect?	—	<u>X</u>	<u>X</u>
(b) Substantially degrade or obstruct any scenic view or vista now observed from public areas?	—	<u>X</u>	<u>X</u>
(c) Generate obtrusive light or glare substantially impacting other properties?	—	<u>X</u>	<u>X</u>

The Costco store project site is currently paved with asphalt and does not contain any structures. The present use of the site is divided between a public parking lot and a Police Department impound lot (See Figures 3 to 5). The site was formerly occupied by the Falstaff brewery, which had been vacant for several years before it was demolished during 1985 and 1986.

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\*Derived from State EIR Guidelines, Appendix G, normally significant effect.



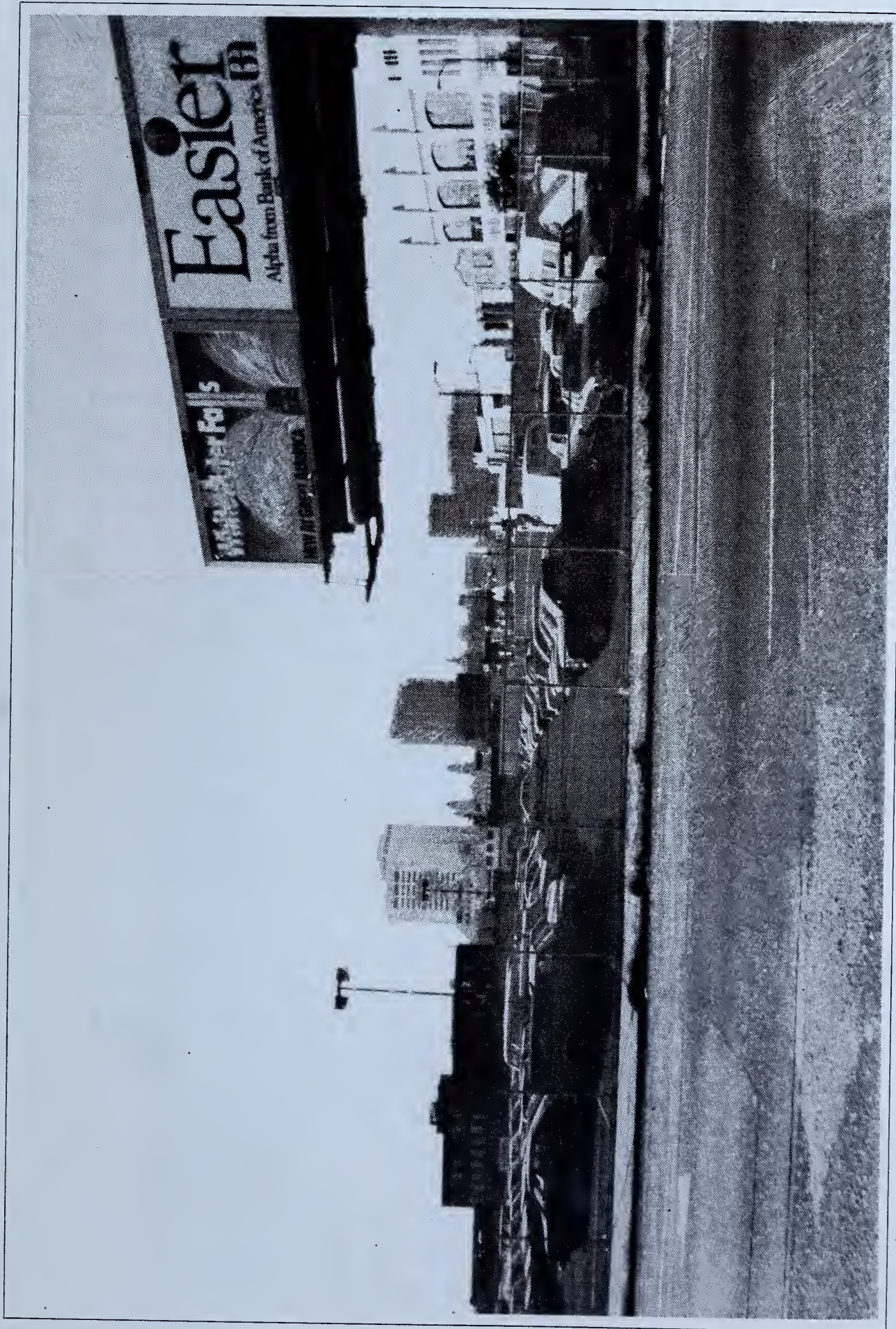
SOURCE: Environmental Science Associates, Inc.

Costco Wholesale

Figure 3

View of Site From  
11th and Harrison Streets





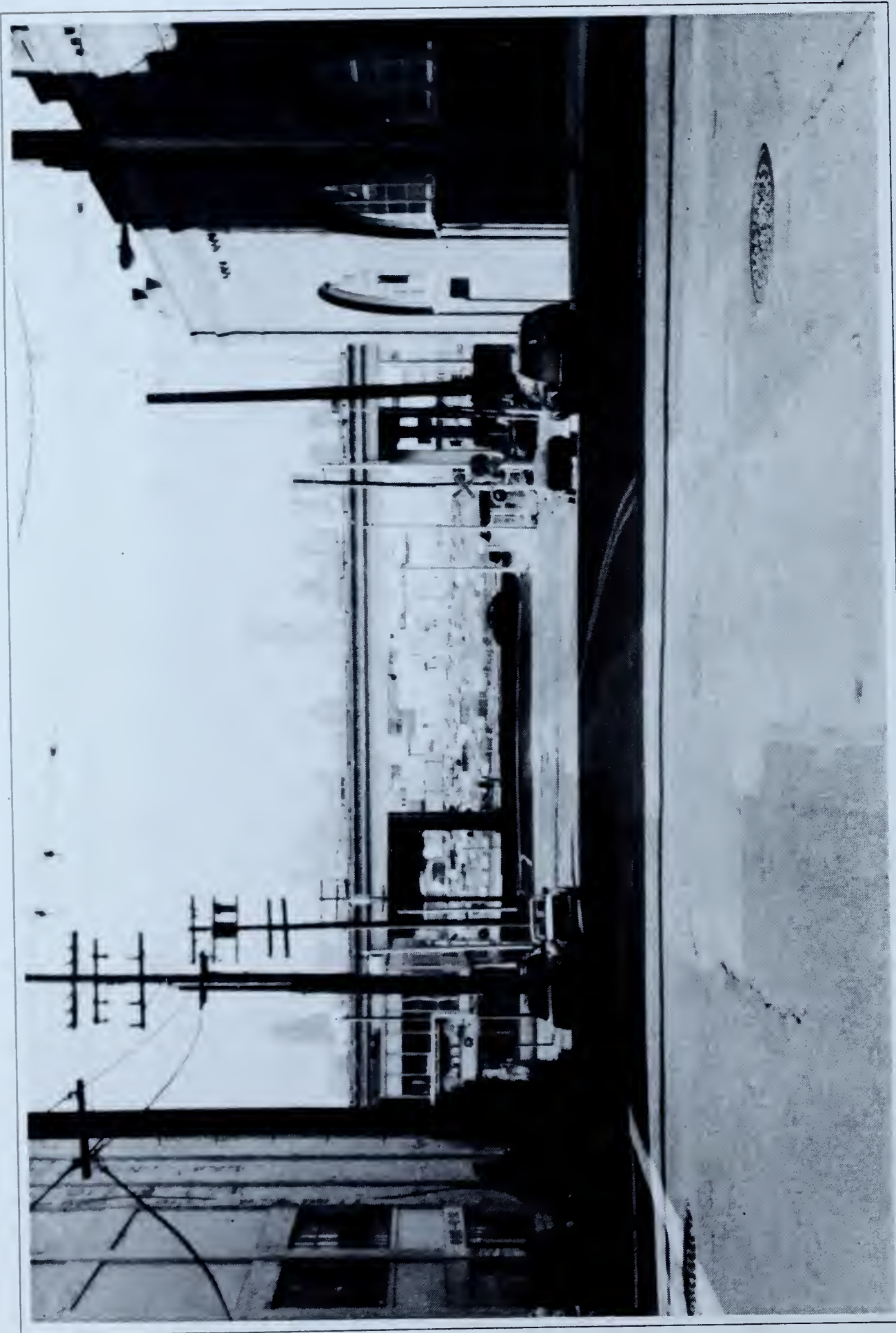
SOURCE: Environmental Science Associates, Inc.

Costco Wholesale

**Figure 4**

View of Site Looking  
Northwest Across Bryant Street





Costco Wholesale

**Figure 5**

View of Site Looking North  
From Bryant and Alameda Streets

SOURCE: Environmental Science Associates, Inc.



Buildings in the project vicinity are generally one- to four-story structures of wood, concrete and brick. The tallest building in the area is the former Jackson Brewing Company building located at Eleventh and Folsom Streets. The five-story tower of this building is the dominant feature on the skyline of the immediate project vicinity. Most buildings in the area are built to the property line, with little or no landscaping. Many of the buildings share common architectural elements including scale, proportion, texture, patterns of facade and window treatments.

Buildings immediately adjacent to the project site include the one-story, corrugated metal Veteran's Cab Company garage and parking lot across Eleventh Street, a three-story brick building across Harrison Street occupied by the San Francisco Department of Social Services food stamp distribution center, the four-story concrete McGuire Company furniture factory across Bryant Street, and several smaller concrete and brick buildings housing a variety of related businesses and services across Tenth Street.

A number of buildings in the project vicinity have been rated for architectural and historic significance by two architectural surveys: the 1976 Department of City Planning (DCP) Architectural Inventory and the survey contained in the South of Market Area Plan of the Master Plan. In the 1976 DCP Inventory, approximately ten percent of the City's entire stock of buildings was awarded a rating for architectural merit ranging from a low of "0" to a high of "5." The total number of buildings which were rated from "3" to "5" represents less than two percent of the City's entire building stock. The South of Market Area Plan classifies certain buildings in the plan area as "significant" or "contributory" depending upon their architectural and historic merit./1/

The highest DCP rated structure in the project vicinity is the former Jackson brewery at Eleventh and Folsom streets, one block north of the project site. This building was assigned a rating of "4" by DCP. Its tower was damaged in the October 1989 earthquake and its owner, Malvina Coffee Imports, is attempting to repair the structure./2/ The South of Market Area Plan of the Master Plan lists the Jackson Brewery as a significant building located outside a historic district. The Jackson Brewery is a candidate for landmark status. Other nearby rated buildings include St. Joseph's Church at Tenth and Howard (DCP rating of "3," designated City Landmark No. 120, two blocks north of site) and its parish house next door; the former James Lick Baths at 165 Tenth Street ("3," two blocks north); the Coca Cola building at Eleventh and Mission ("3," three blocks north); the Salvation Army Harbor Light Center at 1275 Harrison at Ninth ("2," one block east); and 599 Seventh Street at Brannan ("2," three blocks east).

The San Francisco Unified School District building at 1440 Harrison Street, currently used by the City's Department of Social Services, is designated a significant building in the South of Market Plan. This three-story brick structure is located across the street to the north of the project site. Another building designated as significant is located across the street to the east of the site, at 465 Tenth Street. This two-story concrete building, currently occupied by the Spiral Binding Company, extends to four stories in height along its southern edge. Other buildings designated as significant in the South of Market Plan include four brick structures surrounding the Jackson brewery: 319 and 333 Tenth Street, 1477 Folsom Street and 1477-1479 Emberly Alley. Also included is 1400 Folsom Street at Tenth (one block north), a two-story brick building housing a Crocker's Lockers storage facility.

The project site and vicinity are relatively flat in contour. Buildings in the area are not generally visible from beyond the block on which they are located. Exceptions include the Jackson brewery and St. Joseph's Church, the top portions of which are visible on the immediate skyline.

The proposed project would comply with the 40-foot height limit for this district. The walls would be of varying textures and colors of concrete block compatible with the character of masonry buildings in the neighborhood. Decorative metal grating would be installed at the ground floor of parking areas for ventilation. The residential portion of the project would have a design distinct from that of the Costco store.

The proposed project would not be large enough to block views from surrounding areas. The project would be visible from Nob Hill to the north and from Corona Heights and Twin Peaks to the west, but would not be tall enough to prominently contrast with the surrounding area.

The U.S. 101 South Van Ness off-ramp overpass borders the project site at the corner of Eleventh and Bryant Streets, where the ramp is approximately 39 feet above street level.<sup>/3/</sup> The proposed project, built to the maximum 40-foot height limit, would reach a level just below that of the freeway guard rails. Drivers on U.S. 101 would be able to look down onto the project's roof, and would be able to see rooftop mechanical equipment and elevator and mechanical penthouses which could exceed the 40 foot height limit by up to ten feet.



The South of Market Area Plan contains policies applicable to the proposed project. Policy 1 of Objective 3 (encouragement of new, particularly low-income, housing) states, "Increase the supply of housing without adversely affecting the scale, density, and architectural character of existing residential or mixed use neighborhoods or displacing light industrial and/or business service activities." Objective 7 includes policies to preserve the scale and character of the South of Market area. The project would include a moderate-income housing component of comparable density to many nearby multi-story residential buildings. The project's overall scale would be similar to the existing scale of the neighborhood. The project would be similar in height to, although larger than, many surrounding structures. Objective 8 includes policies to enhance neighborhood-serving retail and community services. While the Costco store would serve a wide customer base, it would also provide nearby residents with shopping opportunities not currently available in the South of Market area. Conversely, the project site is noted as a "Proposed Large Park Opportunity Site" in the South of Market Plan; the project as proposed would foreclose that opportunity for development of a park on the site for the foreseeable future.

Mirrored glass that could generate glare affecting other properties would not be used in the project. The project would comply with City Planning Commission Resolution 9212, which prohibits the use of mirrored or reflective glass.

Urban design and architectural/historic resources will not be discussed further in the EIR. Urban design issues and compatibility with Master Plan policies will be some of the topics discussed by the City Planning Commission and the public during the public hearings on the necessary Conditional Use application.

#### NOTES - Visual Quality

- /1/ Marsh, Vincent, planner, San Francisco Department of City Planning, telephone conversation, May 3, 1990.
- /2/ Young, Kendall, architect, Kendall Young Associates, telephone conversation, May 2, 1990.
- /3/ As-built plans of file at California Department of Transportation offices, 3333 California Street, San Francisco.

3) <u>Population</u> . Could the project:	<u>Yes</u>	<u>No</u>	<u>Discussed</u>
*(a) Induce substantial growth or concentration of population?	—	<u>X</u>	<u>X</u>
*(b) Displace a large number of people (involving either housing or employment)?	—	<u>X</u>	<u>X</u>
(c) Create a substantial demand for additional housing in San Francisco, or substantially reduce the housing supply?	—	<u>X</u>	<u>X</u>

There are currently four persons employed as parking attendants on the project site at the existing parking lot. The retail component of the proposed project would generate 75 to 85 full time jobs and 75 to 85 part time jobs. The employment increases estimated for the Costco project would fall within the forecasts of employment presented in the South of Market Plan EIR (85.463E, Final EIR certified December 1989)./1/ Because many of these retail jobs would be for semi- and unskilled workers with low to moderate incomes, including minorities, many of the new jobs are expected to be held by San Francisco residents who are now either unemployed or underemployed./2/ Thus, the project would be unlikely to increase demand for housing in San Francisco. Project construction could generate an unknown number of temporary jobs. Assuming no vacancies, approximately 125-225 persons would be expected to live in the residential component of the proposed project. This resident population is not analyzed quantitatively in the South of Market Plan EIR. In general, the South of Market Plan EIR analysis indicates a low expectation for substantial amounts of new subsidized housing to be built in the Plan area. To the extent such housing can be produced, however, it would be a benefit, since there is and will continue to be in the foreseeable future a chronic shortage of affordable housing./3/ Population and housing will not be analyzed further in the EIR.

#### NOTES - Population

/1/ San Francisco Department of City Planning, South of Market Plan EIR (85.463E), certified December 1989. The South of Market Plan EIR analyzes environmental impacts associated with employment and population changes forecast for the South of Market Plan area (of which the Costco project site is a part), as well as the relationship of Plan Area impacts to cumulative city and regional impacts. The Mission Bay EIR (86.505E, Draft EIR published August 1988) also evaluates cumulative impacts, incorporating the South of Market Plan EIR forecasts. Summaries of the types of cumulative impacts (e.g. transportation, air quality) are presented in the topical sections of this Initial Study or will be presented in the Costco EIR. Both the South of Market Plan and Mission Bay EIRs may be examined at the Department of City Planning, 450 McAllister Street; the San Francisco Main Library; and various branch libraries.

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\*Derived from State EIR Guidelines, Appendix G, normally significant effect.



/2/ San Francisco Department of City Planning, Downtown Plan EIR (EE81.3), certified October 1984, Vol. 2, Appendices, Table I.9, p. I.37.

/3/ See South of Market Plan EIR (85.463E), pp. 91-94.

4) <u>Transportation/Circulation</u> . Could the project:	<u>Yes</u>	<u>No</u>	<u>Discussed</u>
*(a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system?	<u>X</u>	—	<u>X</u>
*(b) Interfere with existing transportation systems, causing substantial alterations to circulation patterns or major traffic hazards?	<u>X</u>	—	<u>X</u>
(c) Cause a substantial increase in transit demand which cannot be accommodated by existing or proposed transit capacity?	—	<u>X</u>	<u>X</u>
(d) Cause a substantial increase in parking demand which cannot be accommodated by existing parking facilities?	—	<u>X</u>	<u>X</u>

Increased employment at the site would increase demand on existing transportation systems. The number of pedestrians in the area would also increase. The project would not alter existing circulation patterns (in terms of direction of traffic and numbers of lanes on adjacent streets) except during construction; its effects on circulation during construction will be discussed in the EIR. The project would increase the number of parking spaces on the site from 115 to 1,020-1,040 (960 retail and 60-80 residential spaces). Trip generation will be discussed in the EIR. Traffic would enter and exit the retail component's parking area on Bryant, Tenth and Eleventh Streets, and could affect traffic on those streets. Vehicular access for the housing component would be from Harrison Street. Localized transportation impacts of the project will be analyzed in the EIR.

The proposed project could cause traffic circulation problems and increases in traffic, transit and parking demand. The EIR will discuss traffic increases and movement as they relate to the operation of the street and freeway network in the project vicinity, including the I-80 and US 101 ramps in the vicinity.

The cumulative transportation effects of development in the South of Market area are analyzed in the Mission Bay and South of Market Plan EIRs. The cumulative analysis

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\*Derived from State EIR Guidelines, Appendix G, normally significant effect.

contained in these EIRs regarding transportation will be summarized in the Costco Wholesale EIR, and the project's effects in relation to cumulative impacts will be discussed.

5) <u>Noise</u> . Could the project:	<u>Yes</u>	<u>No</u>	<u>Discussed</u>
*(a) Increase substantially the ambient noise levels for adjoining areas?	<u>X</u>	<u>—</u>	<u>X</u>
(b) Violate Title 24 Noise Insulation standards, if applicable?	<u>—</u>	<u>X</u>	<u>X</u>
(c) Be substantially impacted by existing noise levels?	<u>—</u>	<u>X</u>	<u>X</u>

Demolition, excavation, and building construction would temporarily increase noise in the site vicinity. The construction period would last about 10-15 months. Project construction noise, including piledriving, and its possible effects on sensitive receptors will be addressed in the EIR.

The noise environment of the site, like much of the South of Market area, is dominated by vehicular traffic noise. The U.S. 101 on-ramp and the South Van Ness off-ramp overpass that borders the project site at the corners of Tenth and Bryant Streets and Eleventh and Bryant Streets are dominant sources of traffic-generated noise. Noise may also be generated from the light-industrial, manufacturing and commercial uses surrounding the project site. The Environmental Protection Element of the Master Plan indicated a day-night average noise level ( $L_{dn}$ ) of 74 dBA near the site in 1974./1,2/

The Environmental Protection Element of the Master Plan contains guidelines for determining the compatibility of various land uses with different noise environments. For noise levels between 70 and 80 dBA, the guidelines recommend an analysis of noise reduction requirements and inclusion of noise reduction measures in commercial building design. Given the estimated noise level near the project site, the Environmental Protection Element indicates that residential development generally should be discouraged. If such development is proposed, however, a noise reduction study must be conducted, and the recommended noise insulation features incorporated into the project. Title 24 of the California Code of Regulations limits interior noise levels for new multi-family residential developments to 45 dBA. Noise reduction measures would be included in the project as part of the design (see p. 29).

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\*Derived from State EIR Guidelines, Appendix G, normally significant effect.



The project would affect noise levels over the long-term through generation of motor vehicle trips. Increases in noise levels would occur along roads serving project-generated traffic. The project would generate 75 to 85 full time jobs and 75 to 85 part time jobs. Three to four thousand persons would visit the site on a daily basis. Also, loading and deliveries, conducted with semi-trucks with trailers and some vans, would take place from 6 a.m. to 12 noon every day of the week. There would be approximately 40 deliveries per day. The amount of traffic generated by the project and cumulative traffic increases at the time of project completion could cause traffic noise levels to increase by 3 dBA  $L_{dn}$ , a noticeable increase. To produce a noticeable increase in environmental noise, a doubling of existing traffic volume would be required.<sup>/3/</sup> Traffic increases of this magnitude could occur with the project during the p.m. peak hour and the Saturday peak hour on Eleventh Street adjacent to the project site. Potential noise associated with parking garages, including horns, car doors slamming and tires screeching, are not expected to increase the average noise level by more than 3 dBA.

The nearest residences to the project site are on Twelfth Street northwest of Harrison Street, approximately 350 feet from the site. A short-term noise measurement taken at that location on Tuesday, August 14, 1990 during evening peak traffic volumes (4 p.m. - 6 p.m.) indicated an average noise level of 70 dBA,  $L_{eq}$ .<sup>/4/</sup> The existing noise level near the site is approximately 74 dBA.<sup>/1/</sup> Assuming a worst-case scenario of traffic doubling due to the project near the intersection of Eleventh and Harrison Streets, the noise level would increase by 3 dBA to 77 dBA at 50 feet from the roadway. Based on the general rule of thumb that noise from a line source attenuates by 3 dBA for every doubling of distance, the noise level at the nearest residence due to the project would be approximately 70 dBA, similar to the existing level.<sup>/5/</sup>

The project would be required to comply with the San Francisco Noise Ordinance, San Francisco Police Code Section 2909, "Fixed Source Noise Levels," which regulates mechanical equipment noise. The project site and surrounding area are within the SLI (Service / Light Industrial) Use District. The Noise Ordinance has not yet been updated to include standards for this recently created district. However, the site was previously contained in the M-1 Use District, within which the Noise Ordinance limits equipment noise levels at the property line to 70 dBA. During lulls in traffic, mechanical equipment generating 70 dBA could dominate the noise environment at the site. The project engineer and architect would include design features in the building to limit mechanical equipment noise levels to 70 dBA. Project operations include the use of a mechanical ventilation

system for the parking garage adjacent to the multi-family residential units. The residential units would be subject to Title 24 noise insulation standards which limit interior noise levels for new multi-family residential developments to 45 dBA. Due to noise levels in the area, relatively large amounts of insulation and relatively stringent glazing requirements would be necessary to adequately insulate the proposed housing. Noise reduction measures would be included in the project as part of the design of the residential units. Operational noise requires no further analysis and will not be included in the EIR.

#### NOTES - Noise

- /1/ San Francisco Department of City Planning, San Francisco Master Plan, Environmental Protection Element, 1974.
- /2/ dBA is a measure of sound in units of decibels (dB). The "A" denotes the A-weighted scale, which simulated the response of the human ear to various frequencies of sound.  
  
 $L_{dn}$ , the day-night average noise level, is a noise measurement based on human reaction to cumulative noise exposure over a 24-hour period, taking into account the greater annoyance of nighttime noises; noise between 10 p.m. and 7 a.m. is weighted 10 dBA higher than daytime noise.
- /3/ See Downtown Plan EIR, Vol. 1, Section IV.E generally and pp. IV.J.8-18. Increases of 1 dBA or less in environmental noise are not noticeable by most people outside a laboratory situation (National Academy of Sciences, Highway Research Board, Research Report No. 117 (1971)). (See also FHWA Highway Traffic Noise Prediction Model, Report #FHWA-RD-77-108, December 1978, p. 8, regarding doubling of traffic volumes producing increases of 3 dBA or more, which are noticed by most people).
- /4/  $L_{eq}$  is the equivalent steady-state sound level which in a stated period of time would contain the same acoustic energy as the time-varying sound level during the same time period. In urban noise environments dominated mainly by traffic noise, the 24-hour  $L_{dn}$  level is typically about the same as the peak-hour  $L_{eq}$ .
- /5/ U.S. Department of Transportation, Federal Highway Administration, Noise Barrier Cost Reduction Procedure STAMINA 2.0/OPTIMA: User's Manual, FHWA-DP-58-1, April 1982, p. 2-2.



6) <u>Air Quality/Climate</u> . Could the project:	<u>Yes</u>	<u>No</u>	<u>Discussed</u>
*(a) Violate any ambient air quality standard or contribute substantially to an existing or projected air quality violation?	<u>X</u>	<u>—</u>	<u>X</u>
*(b) Expose sensitive receptors to substantial pollutant concentrations?	<u>—</u>	<u>X</u>	<u>X</u>
(c) Permeate its vicinity with objectionable odors?	<u>—</u>	<u>X</u>	<u>X</u>
(d) Alter wind, moisture or temperature (including sun shading effects) so as to substantially affect public areas, or change the climate either in the community or region?	<u>—</u>	<u>X</u>	<u>X</u>

Two types of air quality impacts could be expected from the proposed project: long term impacts related to use and operation of the project, including emissions from the store, bakery, parking facilities and dwelling units, and short term impacts from construction activities. The Bay Area Air Quality Management District (BAAQMD) regulates emissions from bakery facilities in the Bay Area. Emissions expected from the project's bakery will be discussed in the EIR. Project related traffic and cumulative downtown traffic can be expected to contribute to existing air pollution near the project site and will also be discussed in the EIR.

Construction activities would temporarily affect local air quality. Demolition and construction activities would not involve burning of any materials and would not create objectionable odor. Demolition, grading and other construction activities would temporarily affect local air quality for about 10-15 months, causing a temporary increase in particulate dust and other pollutants. Dust emission during demolition and excavation would increase particulate concentrations near the site. Dustfall can be expected at times on surfaces within 200 to 800 feet. Under high winds exceeding 12 miles per hour, localized effects including human discomfort might occur downwind from blowing dust. Dust emissions would vary according to the level and type of construction activity, silt content of the soil, and prevailing weather. The state 24-hour standard for fine particulates (PM<sub>10</sub>) could be violated at times in the project vicinity during construction, and visibility at the construction site may be affected temporarily. Relatively large-sized particulates, greater than 30 microns in diameter, are characteristic of construction particulates and settle out of the atmosphere rapidly with increasing distance from the site. More of a nuisance than a hazard for most people, this dust could affect persons with respiratory diseases, as

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\*Derived from State EIR Guidelines, Appendix G, normally significant effect.

well as sensitive electronics or communications equipment. The project sponsor would require the contractor to wet down the construction site twice a day during construction to reduce particulate impacts by at least 50 percent (see mitigation, p. 29).

Diesel-powered equipment would emit, in decreasing order by weight, nitrogen oxides, carbon monoxide, sulfur oxides, hydrocarbons and particulates. This would increase local concentrations temporarily but would not be expected to increase the frequency of violations of air quality standards. The project sponsor would require the project contractor to maintain and operate construction equipment in such a way as to minimize exhaust emissions (see mitigation, p. 29). Construction air quality effects require no further analysis.

The cumulative effects on air quality of traffic emissions from traffic generated by development in the Downtown & Vicinity are analyzed in the Mission Bay and South of Market Plan EIRs. The analysis and conclusions of these EIRs remain current regarding future conditions. The cumulative analysis in the Mission Bay and South of Market Plan EIRs regarding air quality will be incorporated by reference and the project's effects in relation to cumulative effects will be discussed.

The height of the proposed project would not exceed 40 feet. The proposed project would not be expected to significantly alter the shadow or wind environment of the project vicinity. Shadow and wind issues will not be discussed in the EIR.

7) <u>Utilities/Public Services</u> . Could the project:	<u>Yes</u>	<u>No</u>	<u>Discussed</u>
*(a) Breach published national, state or local standard relating to solid waste or litter control?	—	<u>X</u>	—
*(b) Extend a sewer trunk line with capacity to serve new development?	—	<u>X</u>	—
(c) Substantially increase demand for schools, recreation or other public facilities?	—	<u>X</u>	—
(d) Require major expansion of power, water, or communications facilities?	—	<u>X</u>	—

The South of Market Plan EIR concluded that demand for utilities and public services resulting from development in the South of Market area under the South of Market Plan would not be significant. The project would fall within this development forecast. The

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\*Derived from State EIR Guidelines, Appendix G, normally significant effect.



South of Market Plan EIR analysis remains current and valid for future and project conditions. The South of Market Plan EIR (85.463E, Final EIR certified December 7, 1989) may be examined at the Department of City Planning, 450 McAllister Street; the San Francisco Main Library and various branch libraries. This topic requires no further analysis in the EIR.

8) <u>Biology</u> . Could the project:	<u>Yes</u>	<u>No</u>	<u>Discussed</u>
*(a) Substantially affect a rare or endangered species of animal or plant or the habitat of the species?	—	<u>X</u>	—
*(b) Substantially diminish habitat for fish, wildlife or plants; or interfere substantially with the movement of any resident or migratory fish or wildlife species?	—	<u>X</u>	—
(c) Require removal of substantial numbers of mature, scenic trees?	—	<u>X</u>	—

Because the site is covered by impervious surfaces, the project would not affect plant or animal habitats. This topic will not be discussed in the EIR.

9) <u>Geology/Topography</u> . Could the project:	<u>Yes</u>	<u>No</u>	<u>Discussed</u>
*(a) Expose people or structures to major geologic hazards (slides, subsidence, erosion and liquefaction).	—	<u>X</u>	<u>X</u>
(b) Change substantially the topography or any unique geologic or physical features of the site?	—	<u>X</u>	<u>X</u>

A geotechnical investigation would be made for the project, and a detailed geotechnical report would be prepared by a California-licensed civil or structural engineer prior to commencement of construction. The project sponsor and contractor would follow the recommendations of the final report regarding any excavation and construction for the project. Site specific geologic concerns, including seismic considerations, will be discussed in the EIR.

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\*Derived from State EIR Guidelines, Appendix G, normally significant effect.

10) <u>Water</u> . Could the project:	<u>Yes</u>	<u>No</u>	<u>Discussed</u>
*(a) Substantially degrade water quality, or contaminate a public water supply?	—	<u>X</u>	—
*(b) Substantially degrade or deplete groundwater resources, or interfere substantially with groundwater recharge?	—	<u>X</u>	<u>X</u>
*(c) Cause substantial flooding, erosion or siltation?	—	<u>X</u>	<u>X</u>

The site is currently covered with impervious surfaces. The project would cover the site with a building and paved area and therefore would not alter the drainage pattern of the site. Site runoff would drain into the City's combined sanitary and storm drainage system. Should dewatering of the site be required, a mitigation measure to prevent sediment from entering storm sewers is proposed as part of the project (see mitigation, p. 29). The project would not affect drainage patterns or water quality because the site is now entirely covered with impermeable surfaces. No further analysis of this topic is required in the EIR.

11) <u>Energy/Natural Resources</u> . Could the project:	<u>Yes</u>	<u>No</u>	<u>Discussed</u>
*(a) Encourage activities which result in the use of large amounts of fuel, water, or energy, or use them in a wasteful manner?	—	<u>X</u>	<u>X</u>
(b) Have a substantial effect on the potential use, extraction, or depletion of a natural resource?	—	<u>X</u>	<u>X</u>

A minimal but unknown amount of energy is consumed by existing parking uses on the site. Removal of existing structures would require a minimal but unknown amount of energy. Fabrication and transportation of building materials, worker transportation, site development, and building construction would require about 330 billion Btu of gasoline, diesel fuel, natural gas, and electricity./1,2/ Distributed over the estimated 50-year life of the project, this would be about 6.6 billion Btu per year, or about 2 percent of building energy requirements.

New buildings in San Francisco are required to conform to energy conservation standards specified by Title 24 of the California Code of Regulations. Documentation showing compliance with these standards is submitted with the application for the building permit and is enforced by the Bureau of Building Inspection.

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\*Derived from State EIR Guidelines, Appendix G, normally significant effect.



Table 1 shows the estimated operational energy which would be used by the project. Project demand for electricity during PG&E's peak electrical load periods, July and August afternoons, would be about 2,000 kW, an estimated 0.01 percent of PG&E's peak load of 17,600 MW./3/ Project demand for natural gas during PG&E's peak natural gas load periods, January mornings, would be about 47,000 cu. ft. per day, or about 0.001 percent of PG&E's peak load of about 3.7 billion cu. ft. per day./4/ Annual and peak daily electricity and natural gas consumption are shown in Figures 6 and 7.

Projections of electrical use for change that would occur in the South of Market area, as analyzed in the South of Market Plan EIR, indicate a decrease of about 32 million kWh per year between 1985 and 2000 as a result of redevelopment. Natural gas consumption is

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TABLE 1: ESTIMATED PROJECT ENERGY USE/a,e/

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Daily Natural Gas Consumption/b/

Estimated natural gas consumption per sq. ft.	63.0 Btu/c/
Estimated total natural gas consumption	140.0 Therms

Monthly Electric Consumption/b/

Estimated electrical consumption per sq. ft.	0.5 kWh (5,300 Btu)/d/
Estimated total electrical consumption	250,000 kWh (2.5 billion Btu)

Annual Consumption

Estimated total annual natural gas consumption	51,000 Therms (5.1 billion Btu)
Estimated total annual electrical consumption	3.0 million kWh (31.0 billion Btu)
Estimated total annual energy consumption	36.0 billion Btu (6,400 barrels of oil)

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/a/ Energy use includes space conditioning, service water heating, and lighting in accordance with allowable limits under Title 24.

/b/ Electricity and natural gas consumption was based on billing data provided by PG&E for a similar Costco store in Stockton, California.

/c/ Btu (British thermal unit): a standard unit for measuring heat. Technically, it is the quantity of heat required to raise the temperature of one pound of water 1 degree Fahrenheit (251.97 calories) at sea level.

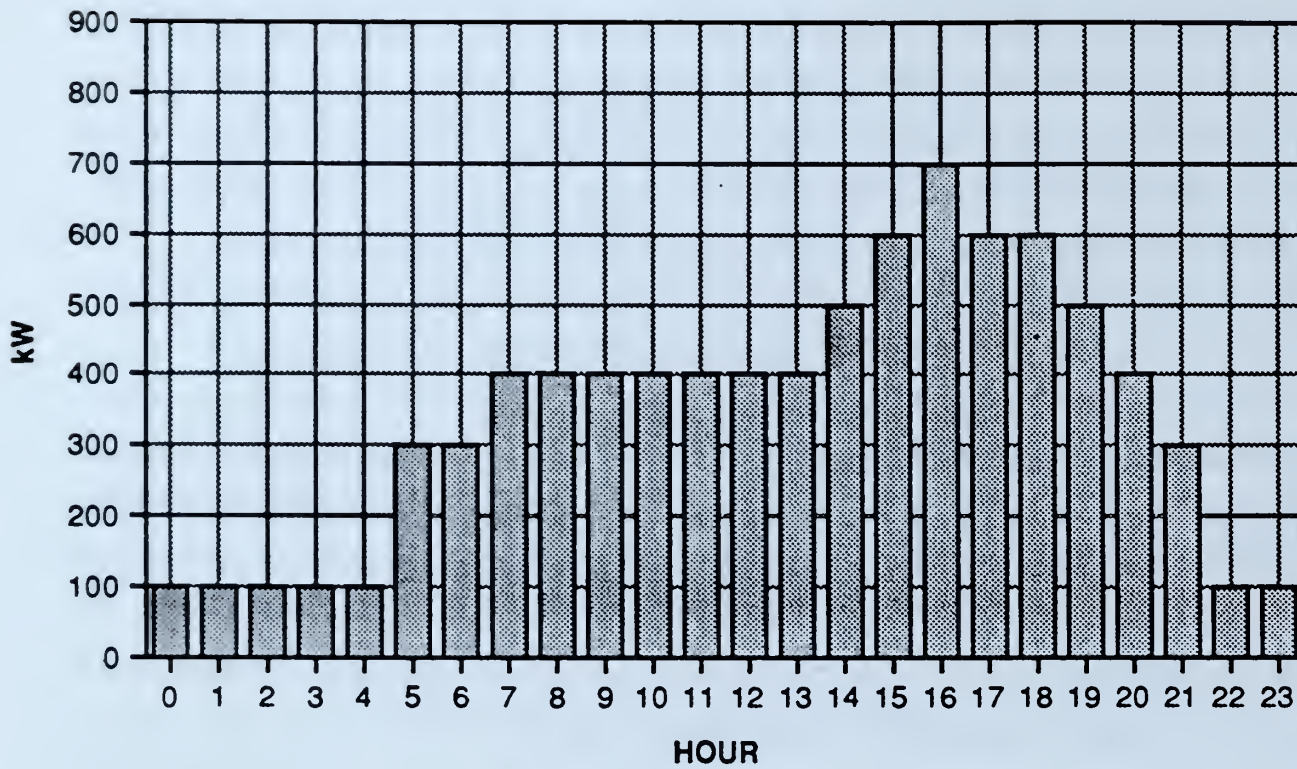
/d/ Energy Conversion Factors:

one gallon gasoline	=	125,000 BTU
one kilowatt (kW)	=	10,239 BTU
one therm	=	100,000 BTU
one barrel oil	=	5,600,000 BTU

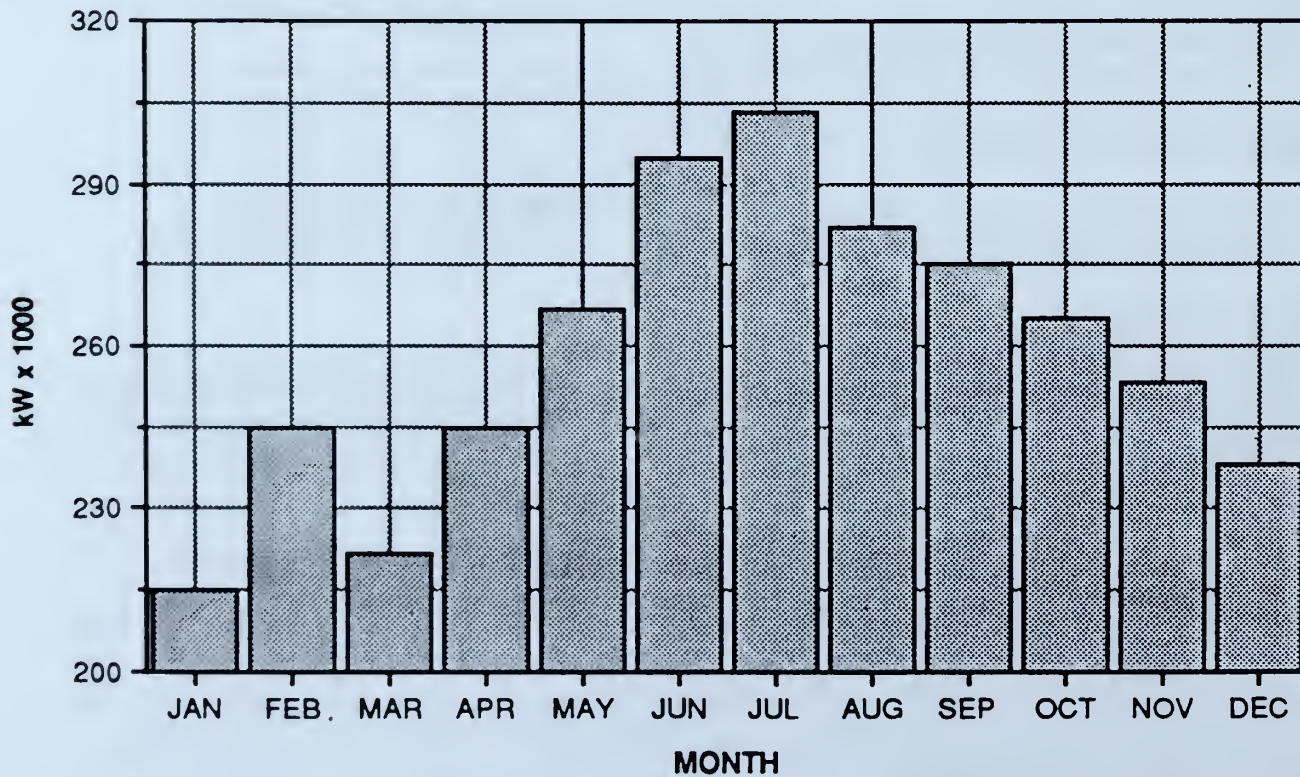
/e/ Monthly and annual figures may not match due to rounding to three significant digits.

SOURCE: PG&E and Environmental Science Associates, Inc.

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### Peak Day Electrical Demand by Hour (August)

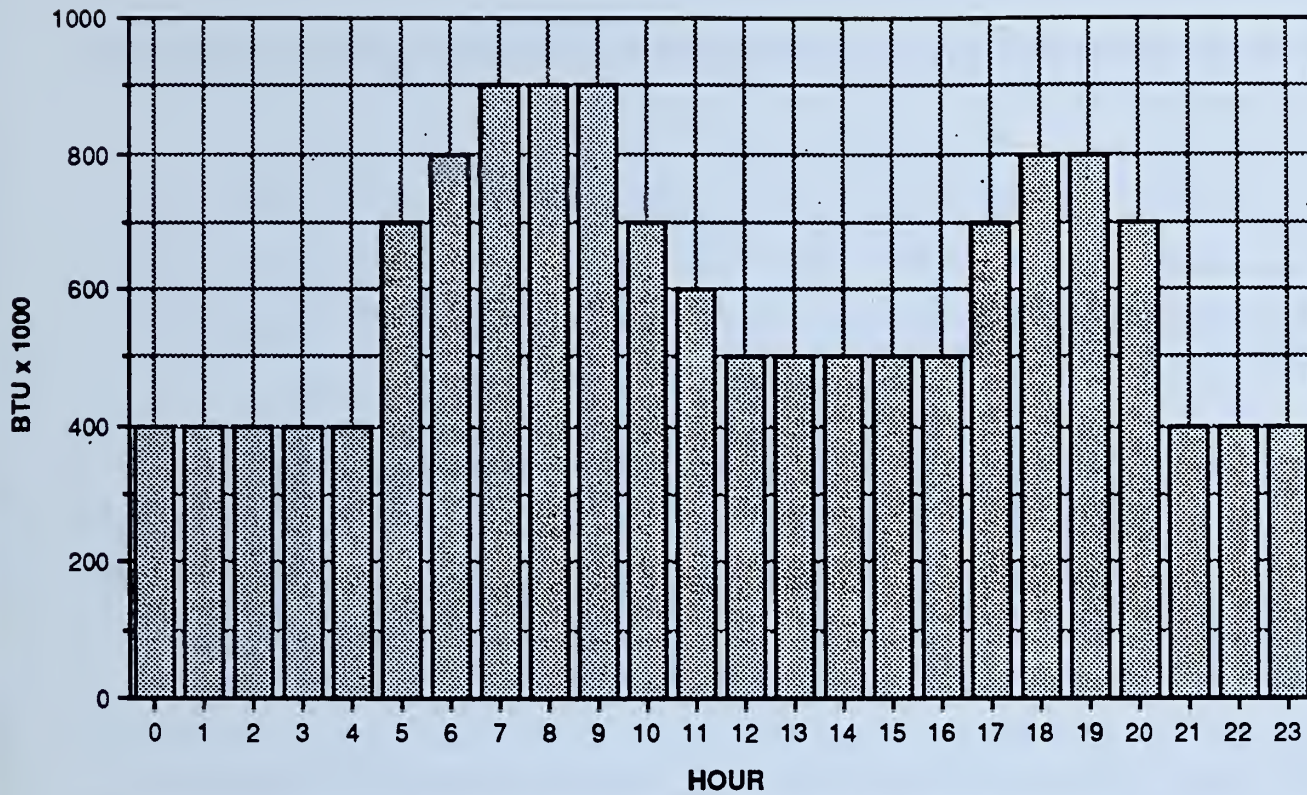


### Annual Consumption of Electricity by Month

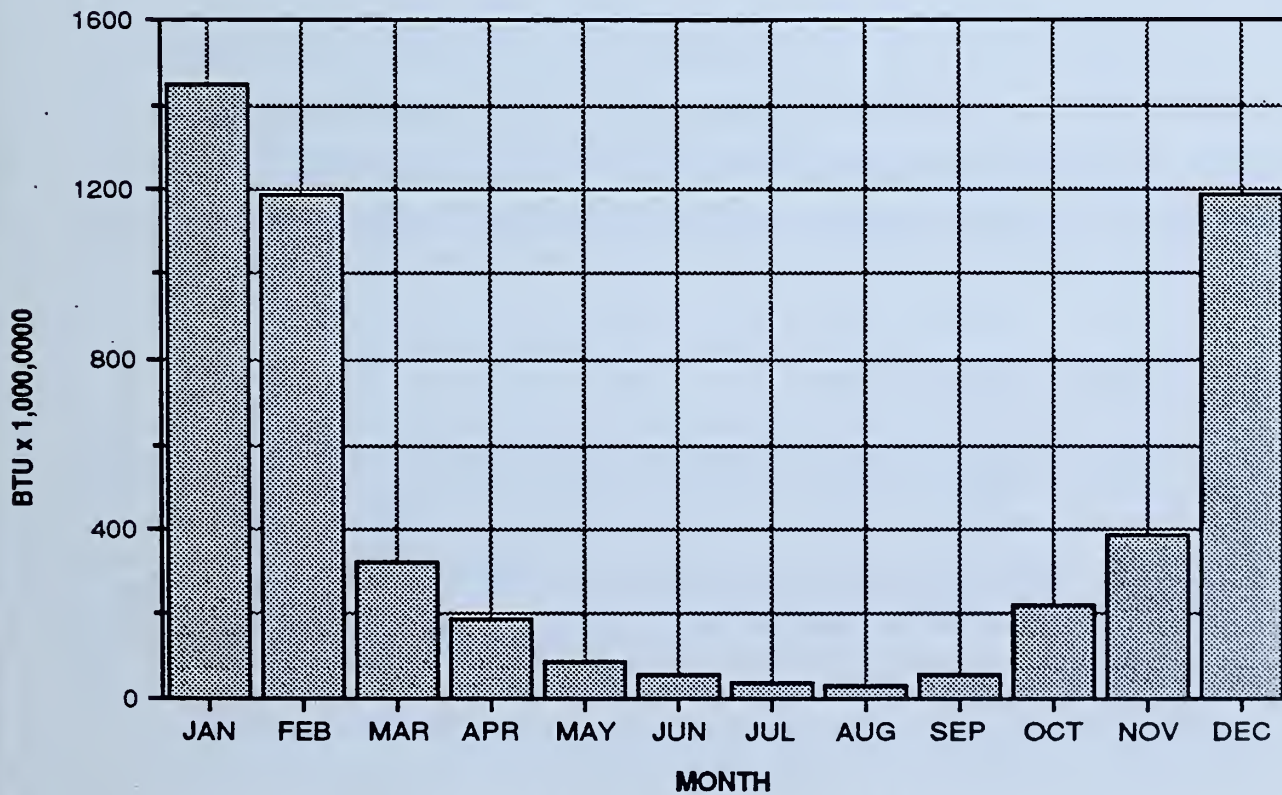
SOURCE: PG & E and Environmental Science Associates, Inc.

**Figure 6**  
**Electricity-Peak Day Demand**  
**and Annual Consumption**





Peak Day Natural Gas Load Distribution (January)



Annual Natural Gas Load Distribution

SOURCE: PG & E and Environmental Science Associates, Inc.

Costco Wholesale ■

**Figure 7**  
Natural Gas Peak Day and  
Annual Gas Load Distribution

expected to decrease by 370 million cu. ft. (about four million therms) per year during the same time period./5/

South of Market energy demands to the year 2000 would be met by PG&E from nuclear sources, oil and gas facilities, hydroelectric and geothermal facilities, and other sources such as cogeneration, wind and imports. PG&E plans to continue receiving most of its natural gas from Canada and Texas under long-term contracts.

Project-related transportation would cause additional, off-site energy consumption. Annual project-related trips (about 4,700 auto vehicle trip ends [vte]), would require about 300,000 gallons of gasoline and diesel fuel annually. These figures were calculated based on data obtained from Wilbur Smith Associates and Caltrans. The total annual transportation energy demand, converted with at-source factors to a common thermal energy unit, would be about 37.0 billion Btu, the energy equivalent of about 6,600 barrels of oil. This projected use is based upon the mix of highway vehicles in California in 1995. Vehicle fuel is expected to decrease as the vehicle fleet becomes more efficient and fuel more expensive.

The South of Market Plan EIR concluded that energy consumption resulting from development in the South of Market area would not be significant and that conclusion remains valid for the future and project conditions. This topic, energy impacts, requires no further analysis and will not be discussed in the EIR.

#### NOTES - Energy/Natural Resources

- /1/ The British thermal unit (Btu) is the quantity of heat required to raise the temperature of one pound of water one degree Fahrenheit at sea level; all references to Btu in this Initial Study are at-sources values. The term "at-source" means that adjustments have been made in the calculation of the thermal energy equivalent (Btu) for losses in energy that occur during generation, transmission, and distribution of the various energy forms as specified in: ERCDC, 1977, Energy Conservation Design Manual for New Non-Residential Buildings, Energy Conservation and Development Commission, Sacramento, California, and Apostolos, J.A., W.R. Shoemaker, and E. C. Shirley, 1978 Energy and Transportation System, California Department of Transportation, Sacramento, California, Project #20-7, Task 8.
- /2/ Hannon, B., et al, 1978, "Energy and Labor in the Construction Sector," Science 202:837-847.
- /3/ Hurler, Jack, Dispatcher for PG&E, telephone conversation, May 3, 1990.



- /4/ Grimm, Robert, Assistant Chief Gas Dispatcher for PG&E, telephone conversation, January 30, 1990.
- /5/ South of Market Plan EIR (85.463E, Final EIR certified December 1989) Table 11, p. 150.

12) <u>Hazards</u> . Could the project:	<u>Yes</u>	<u>No</u>	<u>Discussed</u>
*(a) Create a potential public health hazard or involve the use, production or disposal of materials which pose a hazard to people or animal or plant populations in the area affected?	—	<u>X</u>	<u>X</u>
*(b) Interfere with emergency response plans or emergency evacuation plans?	—	<u>X</u>	<u>X</u>
(c) Create a potentially substantial fire hazard?	—	<u>X</u>	<u>X</u>

The project would not create a potential public health hazard through the production or disposal of harmful materials.

The project would increase the daytime population in the South of Market area. Employees and customers of the retail component and residents of the residential component of the proposed project would contribute to congestion if an emergency evacuation of the area were required. This issue and any appropriate mitigation measures will be addressed in the EIR.

The increased number of persons using the site would not substantially increase the fire hazard at the site as the project would be required to conform to the Life Safety provisions of the San Francisco Building Code and Title 24 of the California Code of Regulations.

A discussion of the potential for encountering toxic materials at the project site remaining from prior uses of the site will be included in the EIR.

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\*Derived from State EIR Guidelines, Appendix G, normally significant effect.

13) <u>Cultural</u> . Could the project:	<u>Yes</u>	<u>No</u>	<u>Discussed</u>
*(a) Disrupt or adversely affect a prehistoric or historic archaeological site or a property of historical or cultural significance to a community or ethnic or social group; or a paleontological site except as a part of a scientific study?	<u>X</u>	<u>—</u>	<u>X</u>
(b) Conflict with established recreational, educational, religious or scientific uses of the area?	<u>—</u>	<u>X</u>	<u>X</u>
(c) Conflict with the preservation of buildings subject to the provisions of Article 10 or Article 11 of the City Planning Code?	<u>—</u>	<u>X</u>	<u>X</u>

Subsurface cultural resources could be encountered on the project site during excavation./1/ The possibility of encountering subsurface cultural resources will be discussed in the EIR.

NOTE - Cultural

/1/ An archival resources report entitled "Archival Cultural Resources Evaluation of the Proposed Costco Development Project, San Francisco, California," was prepared for the proposed site by Allen G. Pastron, Ph.D., of Archeo-Tec in February 1990 and is on file at the Office of Environmental Review, Department of City Planning, 450 McAllister Street, San Francisco.

C. OTHER	<u>Yes</u>	<u>No</u>	<u>Discussed</u>
Require approval and/or permits from City Departments other than Department of City Planning or Bureau of Building Inspection, or from Regional, State, or Federal Agencies?	<u>—</u>	<u>X</u>	<u>—</u>

D. MITIGATION MEASURES	<u>Yes</u>	<u>No</u>	<u>N/A</u>	<u>Discussed</u>
1) If any significant effects have been identified, are there ways to mitigate them?	<u>X</u>	<u>—</u>	<u>—</u>	<u>X</u>
2) Are all mitigation measures identified above included in the project?	<u>X</u>	<u>—</u>	<u>—</u>	<u>X</u>

\*Derived from State EIR Guidelines, Appendix G, normally significant effect.



## MITIGATION MEASURES INCLUDED AS PART OF THE PROJECT

The following are mitigation measures related to topics determined to require no further analysis in the EIR. The EIR will contain a mitigation chapter describing these measures and also including other measures which would be, or could be, adopted to reduce potential adverse effects of the project identified in the EIR.

### Operational Noise

- As recommended by the Environmental Protection Element of the San Francisco Master Plan, an analysis of noise reduction measures for the residential units would be prepared by the project sponsor and recommended noise insulation features would be included as part of the proposed multi-family residential units. For example, such design features could include fixed windows and climate control.

### Construction Air Quality

- The project sponsor would require the contractor to sprinkle demolition sites with water continuously during demolition activity; sprinkle unpaved construction areas with water at least twice per day; cover stockpiles of soil, sand, and other material; cover trucks hauling debris, soils, sand or other such material; and sweep streets surrounding demolition and construction sites at least once per day to reduce particulate emissions. The project sponsor would require the project contractor to maintain and operate construction equipment so as to minimize exhaust emissions of particulates and other pollutants, by such means as a prohibition on idling of motors when equipment is not in use or when trucks are waiting in queues, and implementation of specific maintenance programs to reduce emissions for equipment that would be in frequent use for much of the construction period.

### Water Quality

- If the project were to include dewatering, groundwater pumped from the site would be retained in a holding tank to allow suspended particles to settle, if this is found necessary by the Industrial Waste Division of the Department of Public Works, to reduce the amount of sediment entering the storm drain/sewer lines.

## E. ALTERNATIVES

Alternatives to the proposed project would include the following:

- A. No Project: The site would remain in its existing condition.
- B. Costco Store Only: The site would be developed with the retail component of the proposed project, including parking subject to Conditional Use authorization as with the proposed project.
- C. Housing Only: The site would be developed with approximately 1,125 dwelling units and 1,125 residential-serving parking spaces.
- D. Ground-level Costco Store, with Housing: The site would be developed with 120,000 sq. ft. of retail area at ground level adjacent to a three-story parking garage containing 660 spaces. Sixty to eighty dwelling units would also be developed on the site.
- E. Ground-level Costco Store, without Housing: The site would be developed with 120,000 sq. ft. of retail area at ground level adjacent to a three-story parking garage containing 660 spaces. This alternative would not include any housing.

These alternatives and their potential impacts will be discussed in the EIR.

F. MANDATORY FINDINGS OF SIGNIFICANCE	<u>Yes</u>	<u>No</u>	<u>Discussed</u>
*1) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plants or animal, or eliminate important examples of the major periods of California history or pre-history?	<u>X</u>	<u>—</u>	<u>X</u>
*2) Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals?	<u>—</u>	<u>X</u>	<u>—</u>
*3) Does the project have possible environmental effects which are individually limited, but cumulatively considerable. (Analyze in the light of past projects, other current projects, and probable future projects.)	<u>X</u>	<u>—</u>	<u>X</u>
*4) Would the project cause substantial adverse affects on human beings, either directly or indirectly?	<u>—</u>	<u>X</u>	<u>—</u>

\*Derived from State EIR Guidelines, Appendix G, normally significant effect.



Subsurface cultural resources could be encountered on the project site during excavation. The possibility of encountering cultural resources will be discussed in the EIR.

The project would contribute to cumulative impacts of South of Market development, primarily in the areas of transportation and air quality. Applicable cumulative impacts will be discussed in the EIR.

G. ON THE BASIS OF THIS INITIAL STUDY

- ☐ I find that proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared by the Department of City Planning.
- ☐ I find that although the proposed project could have a significant effect on the environment, there WILL NOT be a significant effect in this case because the mitigation measures, numbers \_\_\_\_\_, in the discussion have been included as part of the proposed project. A NEGATIVE DECLARATION will be prepared.
- ☒ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.



BARBARA W. SAHM  
Environmental Review Officer  
for

DEAN L. MACRIS  
Director of Planning

DATE:

September 17, 1990

**APPENDIX B: TRANSPORTATION**

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**INTERSECTION ANALYSIS METHODOLOGY**

Traffic counts were undertaken at the five project area intersections shown in Tables 5 and 6, pp. 69-70, by Wilbur Smith Associates during the weekday p.m. peak period (4:00 p.m. to 6:00 p.m.) and the Saturday peak period (12:30 p.m. to 3:30 p.m.) to determine existing peak-hour levels of service (see Project Key Travel Factors, pp. A.42-43 of this appendix). Counts were undertaken on November 28 and 29, 1989 and on Saturday, December 2, 1989. Because of temporary changes in the circulation pattern following the October earthquake (i.e., Eleventh Street was one-way southbound north of Harrison Street), two intersections (Harrison Street / Eleventh Street and Harrison Street / Tenth Street) were re-counted on Wednesday, January 3, 1990. (Saturday counts were not re-done because Saturday traffic was found to be substantially lower than weekday traffic and was not a critical consideration in the analysis.)

Four of the five intersections surveyed were subjected to Level-of-Service (LOS) analysis based on the 1980 Circular 212 Planning Method. For signalized intersections, the level of service is related to the volume-to-capacity ratio (V/C). To determine the V/C, the critical volume (the sum of volumes of conflicting movements on a per lane basis) is divided by the operating capacity per lane. If the critical volume is equal to the capacity, the V/C ratio is 1.00, and the LOS is between E and F. A V/C ratio of 0.80 indicates a LOS between C and D, and is characterized by stable flows with reduced mobility and speed, and moderate delay at the intersection. V/C ratios greater than 0.80 are characterized by further reductions in mobility and speed and greater delays at the intersection. In San Francisco, LOS D is considered the acceptable threshold level of service. See Table B-1 on p. A.35 for descriptions of service levels and corresponding V/C ratios.

The intersection at Bryant Street / Tenth Street was re-counted on Tuesday, July 17, 1990 during the p.m. peak period (4:00 p.m. to 6:00 p.m.) and analyzed using the operational analysis procedure defined in the 1985 Highway Capacity Manual (HCM). The reevaluation of this intersection was done on the basis of complexities during p.m. peak-hour operations at this intersection (e.g., delays for freeway-bound vehicles caused by congestion from US 101 onto the freeway on-ramp and into this



intersection). This procedure results in the determination of level of service for each lane group or approach, as well as the level of service for the intersection as a whole. The HCM method estimates intersection level of service based on average vehicle delay. In order to calculate delay, data describing the intersection's physical characteristics (e.g., lane widths), traffic conditions (e.g., percent heavy vehicles), and control devices (e.g., signal timing) are necessary.

It should be noted that there were phenomena occurring in the area at the time these counts were taken which could possibly result in inflated service levels. November counts used at intersections may represent seasonally high activity as this was the Christmas shopping season. Traffic activity on local streets in the South of Market Area have been observed to be somewhat high since the October 1989 earthquake due to the closure of the Embarcadero Freeway and the partial closure of I-280. However, this location is far enough away from the Union Square shopping district and the Embarcadero freeway that these phenomena should not represent a substantial effect. The overall intersection peak-hour traffic volumes for the Bryant Street / Tenth Street intersection were lower by approximately 350 vehicles in July 1990 than those recorded in November 1989. A portion of this volume decrease can be attributed to the absence of holiday shopping activity in the area. In addition, post-earthquake commuters over time have made adjustments in their commuting routines. Changes in modal choice and a more even distribution of peak-hour traffic on downtown streets would account for the drop in overall traffic volumes at this intersection (see Project Key Travel Factors, pp. A.42-43 of this appendix).

The overall operation of the Tenth Street / Bryant Street intersection is estimated at LOS C during the weekday p.m. peak hour. The location of the U.S. 101 southbound on-ramp and the heavy approach volume at Tenth Street combine to create some operational problems with this intersection. Due to peak-hour congestion on U.S. 101, traffic was observed backed up along the on-ramp and into the intersection. This congestion at the on-ramp resulted in many vehicles from the Tenth Street approach making sudden and illegal lane changes in order to avoid the ramp congestion and continue in a southbound direction on Tenth Street. Individual lane group analysis are as follows:

- Eastbound - Through/Right: Delay 17.8 (sec/veh), LOS C;
- Southbound - Left (Bryant Street): Delay 8.6 (sec/veh), LOS B;
- Southbound - Left/Through (101 on-ramp / Tenth Street): Delay 28.2 (sec/veh), LOS D.

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TABLE B-1: VEHICULAR LEVELS OF SERVICE AT SIGNALIZED INTERSECTIONS  
(BASED ON VOLUME TO CAPACITY [V/C] RATIO)

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Level of Service	Description	Volume/Capacity (v/c) Ratio/a/
A	Level of Service A describes a condition where the approach to an intersection appears quite open and turning movements are made easily. Little or no delay is experienced. No vehicles wait longer than one red traffic signal indication. The traffic operation can generally be described as excellent.	less than 0.60
B	Level of Service B describes a condition where the approach to an intersection is occasionally fully utilized and some delays may be encountered. Many drivers begin to feel somewhat restricted within groups of vehicles. The traffic operation can generally be described as very good.	0.61-0.70
C	Level of Service C describes a condition where the approach to an intersection is often fully utilized and back-ups may occur behind turning vehicles. Most drivers feel somewhat restricted, but not objectionably so. The driver occasionally may have to wait more than one red traffic signal indication. The traffic operation can generally be described as good.	0.71-0.80
D	Level of Service D describes a condition of increasing restriction causing substantial delays and queues of vehicles on approaches to the intersection during short times within the peak period. However, there are enough signal cycles with lower demand such that queues are periodically cleared, thus preventing excessive back-ups. The traffic operation can generally be described as fair.	0.81-0.90
E	Capacity occurs at Level of Service E. It represents the most vehicles that any particular intersection can accommodate. At capacity there may be long queues of vehicles waiting upstream of the intersection and vehicles may be delayed up to several signal cycles. The traffic operation can generally be described as poor.	0.91-1.00
F	Level of Service F represents a jammed condition. Back-ups from locations downstream or on the cross street may restrict or prevent movement of vehicles out of the approach under consideration. Hence, volumes of vehicles passing through the intersection vary from signal cycle to signal cycle. Because of the jammed condition, this volume would be less than capacity.	1.01+

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/a/ Capacity is defined as Level of Service E.

SOURCE: Environmental Science Associates, Inc. from *Transportation Research Circular No. 212*, Transportation Research Board, 1980.

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TABLE B-2: VEHICULAR LEVELS OF SERVICE AT SIGNALIZED INTERSECTIONS  
(BASED ON AVERAGE STOPPED DELAY PER VEHICLE)

Level of Service	Description	Average Stopped Delay /a/
A	Level of Service A describes operations with very low delay. This occurs when progression is extremely favorable, and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay. The traffic operation can generally be described as excellent.	0.0-5.0
B	Level of Service B describes operations with low delay. This generally occurs with good progression and/or short cycle lengths. More vehicles stop than for Level of Service A, causing higher levels of average delay. The traffic operation can generally be described as very good.	5.1-15.0
C	Level of Service C describes operations with moderate delays. These higher delays may result from fair progression and/or longer cycle lengths. Vehicles occasionally may have to wait more than one red traffic signal indication. The number of vehicles stopping is substantial at this level, although many still pass through the intersection without stopping. The traffic operation can generally be described as good.	15.1-25.0
D	Level of Service D describes operations with moderately high delays. Congestion is more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volume/capacity ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Some vehicles have to wait more than one red traffic signal phase. The traffic operation can generally be described as fair.	25.1-40.0
E	Level of Service E describes operations at the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high volume/capacity ratios. Vehicles may be delayed through several signal cycles. The traffic operation can generally be described as poor.	40.1-60.0
F	Level of Service F describes operations with delay unacceptable to most drivers. This condition often occurs when arrival flow rates exceed the capacity of the intersection. It may also occur at high volume/capacity ratios below 1.00 with many vehicles having to wait more than one red traffic signal indicator. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.	60.0+ -

/a/ Level of Service criteria are stated in seconds, in terms of the average stopped delay per vehicle for a 15-minute analysis period.

SOURCE: Environmental Science Associates, Inc. from *Highway Capacity Manual*, Special Report 209, Transportation Research Board, 1985.

**PROJECT AREA PARKING INVENTORY AND PARKING USAGE SURVEY**

Parking surveys were undertaken by Wilbur Smith Associates on Saturday, December 2, and Wednesday, December 6, 1989 from noon to 5:00 p.m. at all on-street spaces within the two-block radius from the site depicted in Figure B-1. These surveys included an inventory and hourly parking accumulation studies at all on-street facilities in the area plus the existing public lot on the site. Parking duration and turnover studies were also undertaken during these two periods at all curb faces on the northeast side of the U.S. 101 freeway within one block of the site. It was assumed that the psychological barrier of the freeway plus the industrial nature of some of the land uses on the other side of the freeway would make spaces southwest of the freeway less attractive to potential retail parkers.

Table B-3 presents a summary of existing parking supply and of observed usage in December, 1989. It should be noted that the parking supply listed for certain categories represents estimates, such as in locations where parking spaces are not marked. Also, at some locations curb markings for loading zones or red zones were observed to be faded and apparently ignored by parkers, making parking space counts a matter of judgment. Figure B-1 shows the type and number of on-street parking spaces in the survey area.

The parking area designated as "primary" (i.e., within one block of the Costco site and on the same side of the freeway) contains approximately 640 parking spaces including loading zones and handicap spaces. Approximately 35% of these spaces are nominally time-limited to one-hour parking or less, and another 23% of spaces are limited to two-hour parking. Outside the "primary" area, unlimited spaces prevail, representing approximately 65% of spaces. This "secondary" area also contains the largest number of metered spaces, primarily along Howard Street, and Ninth and Tenth Streets north of Harrison Street.

Figures B-2 and B-3 depict categories of peak parking accumulation for the surveyed weekday and Saturday; this information is also summarized in Table B-3. Overall, more than 98% of on-street parking spaces were occupied during the early afternoon peak period, with accumulation exceeding the capacity of legal parking spaces in the fringe areas. This occurs when cars park in illegal spaces, such as red zones and driveways, and when long-term parkers park closer together in unmarked curb spaces





Costco Wholesale  
**Figure B-1**  
 Inventory of Existing Parking

SOURCE: Wilbur Smith Associates

TABLE B-3: EXISTING PROJECT AREA PARKING SUPPLY AND USAGE

<u>Type of Space</u>	<u>Primary Area/a/</u>	<u>Secondary Area/b/</u>	<u>Total</u>
30 Minute Meters	0	7	7
1 Hour Meters	36	87	123
2 Hour Meters	0	0	0
1 Hour Unmetered	188	99	287
2 Hour Unmetered	144	150	294
Unlimited	226	776	1,002
Special Zones /c/	<u>45</u>	<u>68</u>	<u>113</u>
TOTAL	639	1,187	1,826
Weekday Parking Accumulation	602	1,201	1,803
Percent of Capacity	94.2	101.2	98.7
Saturday Parking Accumulation	351	734	1,085
Percent of Capacity	54.9	61.8	59.4

/a/ Within one block of the site and northeast of the U.S. 101 freeway.

/b/ Two blocks from the site and/or across U.S. 101 Freeway.

/c/ Includes white, yellow and green zones and handicap spaces.

SOURCE: Wilbur Smith Associates

than is typical for parallel parking. As seen in Figure B-2, more than 50 curb faces displayed parking accumulation in excess of 100% of capacity, and a number of other curb faces reached accumulations of 85 to 100% of capacity. Because short term parking rarely reaches 100% of capacity (since some spaces are being vacated even while other vehicles are searching for spaces), 85 to 90% of theoretical capacity is frequently considered as "practical" capacity.





Costco Wholesale  
**Figure B-2**  
 Weekday Peak Parking Accumulation

SOURCE: Wilbur Smith Associates



Costco Wholesale ■  
**Figure B-3**  
Saturday Peak Parking Accumulation

SOURCE: Wilbur Smith Associates



The saturated peak parking situation observed on the weekday suggests usage of the on-street spaces for long-term parking. Parking duration studies, accomplished by hourly recording of license plates, confirm this. Over the five-hour period surveyed on a December weekday, nearly one-third of the curb faces displayed average parking duration of three hours or more, and about half of all curb faces had average parking durations of two to three hours. About one-fifth of curb faces in the "primary area" (i.e., those potentially most attractive to retail shoppers) displayed average parking duration characteristics typical of short-term (under two hours) parkers.

As Figure B-3 and Table B-3 indicate, observed Saturday parking characteristics were different, with about 60% of legal spaces occupied during the area-wide peak, and even less in the "primary" area of on-street parking. These observations indicate that even in the pre-Christmas shopping season, the pressure on the parking supply is far less on weekends than on weekdays.

As noted in Figures B-2 and B-3, the existing public lot on the Costco site reached peak parking accumulations of less than 50% of capacity on both the weekday and Saturday survey days. Actual observed parking usage at this facility was 59 of 130 spaces (45%) on the weekday and 25 of 130 spaces (19%) on Saturday.

## **PROJECT KEY TRAVEL FACTORS**

### **PEAK PERIODS**

The weekday peak period (4:00 p.m. to 6:00 p.m.) and the Saturday peak period (12:30 p.m. to 3:30 p.m.) were chosen to determine existing peak-hour levels of service based on the following considerations. During weekday conditions, Costco-related traffic would be highest during the midday period; however, overall traffic volumes would be much higher during the p.m. peak hour selected for analysis. The a.m. peak period was not analyzed because the Costco store would not be open during this period. For weekend conditions, the existing traffic volumes are light, while the project traffic volumes would be heavy. The appropriate analysis for weekend conditions would be expected to coincide with the project's peak traffic generation (12:30 p.m. to 3:30 p.m.).

## INTERSECTIONS/FREEWAY RAMPS

The five intersections surveyed were selected for analysis on the basis of their proximity to the project and the high probability that they would be directly affected by the proposed project. The I-80 Bryant / Eighth Streets on-ramp and the Harrison /Eighth Streets off-ramp were not analyzed because the project would not be expected to attract customers from the East Bay due to the availability of Costco stores there. The I-80 Harrison / Seventh Streets on-ramp was not analyzed due to the fact that the U.S. 101 Bryant / Tenth Streets on-ramp provides more direct access to the same direction of freeway travel.



## APPENDIX C: AIR QUALITY

TABLE C-1: SAN FRANCISCO AIR POLLUTANT SUMMARY, 1987-1989

Pollutant	Standard	Monitoring Data by Year /a/		
		1987	1988	1989
<u>Ozone (O<sub>3</sub>)</u>				
Highest 1-hr average, ppm/b/	0.09/c/	0.09	0.09	0.08
Number of standard excesses		0	0	0
<u>Carbon Monoxide (CO)</u>				
Highest 1-hr average, ppm	20.0/c/	17.0	15.0	14.0
Number of standard excesses		0	0	0
Highest 8-hr average, ppm	9.0/c/	<u>10.0</u>	<u>12.8</u>	9.0
Number of standard excesses		1	1	0
<u>Nitrogen Dioxide (NO<sub>2</sub>)</u>				
Highest 1-hr average, ppm	0.25/c/	0.15	0.12	0.14/e/
Number of standard excesses		0	0	0
<u>Sulfur Dioxide (SO<sub>2</sub>)</u>				
Highest 24-hr average, ppm	0.05/d,f/	0.01	0.01	0.02
Number of standard excesses		0	0	0
<u>Particulate Matter-10 Micron (PM<sub>10</sub>)</u>				
Highest 24-hr average, ug/m <sup>3</sup> /b/	50/c/	<u>65</u>	<u>117</u>	<u>101</u>
Number of standard excesses, /g/		4	5	13
Annual Geometric Mean, ug/m <sup>3</sup>	30/c/	21.7	23.1	<u>31.6</u>
<u>Lead (Pb)</u>				
Highest 30-day average, ug/m <sup>3</sup>	1.5/d/	0.10	0.11	0.09
Number of standard excesses		0	0	0

NOTES: NR = Not Recorded; NA = Not Applicable  
Underlined values indicate violations of standards.

/a/ CO data were collected at the BAAQMD monitoring station at 939 Ellis Street; all other data were collected at the Arkansas Street station.

/b/ ppm - parts per million; ug/m<sup>3</sup> - micrograms per cubic meter.

/c/ State standard, not to be exceeded.

/d/ State standard, not to be equaled or exceeded.

/e/ Data presented are valid, but incomplete in that an insufficient number of valid data points were collected to meet EPA and/or ARB criteria for representativeness.

/f/ State standard applies at locations where state 1-hour ozone or particulate standards are violated. Federal standard of 365 ug/m<sup>3</sup> applies elsewhere.

/g/ Measured every six days.

SOURCE: California Air Resources Board, *Air Quality Data Summaries*, 1987-1989.

**APPENDIX D: TYPICAL NOISE LEVELS**

**TABLE D-1: TYPICAL NOISE LEVELS**

	<u>Decibels</u>	
	110	Pile driver (from 50 feet)
Very Loud	100	
	90	Light helicopter take-off (from 125 feet)
	80	Diesel truck (from 50 feet)
Loud	80	Radio or TV playing in Living Room
	70	
		Passenger car on city street (from sidewalk)
	60	
Quiet	50	
	40	
Very Quiet		Whisper
		Rustle of paper
	30	

**SOURCE:** Department of City Planning, "A Proposal for Citizen Review: Transportation Noise, Environmental Protection Element of the Comprehensive Plan of San Francisco," August, 1984.



## APPENDIX E: HAZARDOUS MATERIALS

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### HAZARDOUS WASTE REGULATORY FRAMEWORK

Laws and regulations govern the management of hazardous materials and wastes at the federal, state, and local levels. The major federal and state laws and regulations are discussed below.

#### FEDERAL

The United States Environmental Protection Agency (EPA) is responsible for enforcing regulations at the federal level pertaining to hazardous materials and wastes.

- The primary federal hazardous waste and hazardous substance laws are contained in the Resource Conservation and Recovery Act of 1976 (RCRA), and in the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA). These laws require that responsible parties report any known hazardous waste contamination of soil or groundwater to the EPA pursuant to applicable regulations. (State and local agencies also must be involved. In San Francisco, reporting must include the California Department of Health Services, the San Francisco Bay Area Regional Water Quality Control Board, or the San Francisco Department of Public Health, depending on specific circumstances.) Any contamination that threatens public health or the environment must be remediated by the responsible party according to certain standards set by the EPA.
- Federal regulations pertaining to hazardous substances and wastes are contained in the *Code of Federal Regulations* (40 CFR). Statutes that authorize these regulations are set forth in the *United States Code*. The regulations contain specific guidelines for determining whether a waste is hazardous, based on either the source of generation or the characteristics of the waste. Determination of standards for remediation of soil and groundwater contamination is performed on a case-by-case basis by the agency with lead jurisdiction. However, extensive federal guidance exists for determining acceptable levels of residual contaminants in soil and groundwater.

## STATE

- There are two separate hazardous waste programs on a statewide level in California, one by the U.S. EPA and one by the California EPA. The Department of Toxic Substances Control within the California Environmental Protection Agency is the
- agency empowered to enforce state hazardous materials and waste regulations in
- California, independent of the U.S. EPA.

California hazardous materials and waste laws incorporate federal standards, but in many respects are stricter. For example, the California Hazardous Waste Control Law,

- the state equivalent of RCRA, contains a much broader definition of hazardous waste. Some substances not considered hazardous under federal law are considered hazardous under state law. The California Hazardous Substance Account Act, essentially the equivalent of CERCLA, contains a provision for designation of state funds to clean up sites where private funding is unobtainable. State hazardous materials and waste laws are contained in the *California Code of Regulations (CCR)*, Titles 22 and 26.

Regulations implementing the California Hazardous Waste Control Law list 791 hazardous chemicals and 20 to 30 more common materials that may be hazardous; establish criteria for identifying, packaging and labeling hazardous wastes; prescribe management of hazardous wastes; establish permit requirements for hazardous waste treatment, storage, disposal and transportation; and identify hazardous wastes that cannot be disposed of in landfills.

Under both RCRA and the California Hazardous Waste Control Law, hazardous waste manifests must be retained by the generator for a minimum of three years. A hazardous waste manifest lists a description of the waste, its intended destination, and regulatory information about the waste. A copy of each manifest must be filed with the Department of Toxic Substances Control. The generator must match copies of hazardous waste manifests with receipts from the treatment / disposal / recycling facility to confirm the wastes were properly handled.

The Project Area is located within the jurisdiction of the San Francisco Bay Regional Water Quality Control Board (RWQCB). The RWQCB is authorized by the State Water Resources Control Board to enforce the provisions of the Porter-Cologne Water



Quality Control Act of 1969, which incorporates federal water protection laws and additional state law provisions. That Act gives the RWQCB authority to require groundwater investigations when the quality of the groundwaters or surface waters of the state have been or could be threatened, and to remediate the site if necessary.

For sites requiring remediation, the level of site cleanup is determined on a case-by-case basis. The California Department of Toxic Substances Control, the RWQCB, or a local agency could act as the lead state agency in site investigations and remediation projects. The state determines the level and extent of required clean-up, based on the specific site conditions and surrounding land uses. State clean-up standards can be more restrictive than federal standards; both state and federal standards are used to determine clean-up levels. Clean-up standards employed by the RWQCB can be more stringent than those used by EPA or the Department of Toxic Substances Control, and are region-specific.<sup>1/</sup> If soils containing hazardous materials are excavated, the Bay Area Air Quality Management District (BAAQMD) may impose specific requirements on such activities to protect ambient air quality from dust or airborne contaminants. For example, BAAQMD Regulation 8, Rule 40 limits emissions of organic compounds from soil that has been contaminated by organic chemical or petroleum chemical leaks or spills, and describes acceptable procedures for controlling emissions from such soils and from underground storage tanks intended for removal.

### **HAZARDOUS SUBSTANCE WORKER SAFETY REQUIREMENTS**

The California Occupational Safety and Health Administration (Cal/OSHA) and the Federal Occupational Safety and Health Administration (Fed/OSHA) are the agencies responsible for assuring worker safety in the handling and use of chemicals in the workplace. Under authority of the Occupational Safety and Health Act of 1970, Fed/OSHA has adopted numerous regulations pertaining to worker safety (contained in the *Code of Federal Regulations* Title 29 [29 CFR -- Labor]). These regulations set standards for safe workplaces and work practices, including standards relating to hazardous material handling. In California, Cal/OSHA assumes primary responsibility for developing and enforcing workplace safety regulations. Because California has a federally approved OSHA program, it is required to adopt regulations that are at least as stringent as those found in 29 CFR. Cal/OSHA standards are generally more stringent than federal regulations.

Cal/OSHA regulations concerning the use of hazardous materials in the workplace (detailed in Title 8 of the *California Code of Regulations* [8 CCR]) include requirements for safety training, availability of safety equipment, accident and illness prevention programs, hazardous substance exposure warnings, and emergency action and fire prevention plan preparation. Cal/OSHA enforces hazard communication program regulations, which contain training and information requirements, including procedures for identifying and labeling hazardous substances, communicating hazard information related to hazardous substances and their handling, and preparation of health and safety plans to protect workers and employees at hazardous waste sites./2/ The hazard communication program requires that Material Safety Data Sheets (MSDSs) be available to employees and that employee information and training programs be documented.

### **POTENTIAL SOURCES OF CONTAMINATION FROM OFF-SITE ACTIVITIES**

Land can be affected by spills or contamination at adjacent properties. Numerous historic industries that were potential sources of contamination operated in the vicinity of the project. Uses of hazardous materials or production of hazardous wastes on parcels adjacent to the project site could have caused contamination affecting the subject property./3/ The primary route of migration of contaminants from one site to another is through groundwater./4/ In the project area, shallow groundwater is found about ten feet beneath the ground surface and is assumed to flow generally to the east, toward San Francisco Bay./3/ On the basis of Lee and Praszker's *Environmental Site Assessment*, the potential for site contamination from neighboring land uses can be generally assessed./5/

This review focuses on current and past land uses that would be most likely to have caused soil and/or groundwater contamination at the project site through contamination of properties adjacent to the site. Discussions of sites farther away than about one-half block (less likely to have caused contamination on the site because of their greater distance) can be found in Lee and Praszker's *Environmental Site Assessment*. It is possible that other contamination due to identified or non-identified historic land uses exists in the vicinity. However, the information below, as well as the on-site uses noted above, would be representative of the nature of the potential soil and groundwater contamination in the area.



Table E-1 on p. A.51 lists sites identified as being possible sources of soil and/or groundwater contamination in the vicinity of the project. Locations of the historic businesses and USTs are shown on Figure 9 on p. 42.

Two active businesses that are potential sources of contamination were noted nearby:/3/

- Discount Complete Auto Repair, 398 Tenth Street (Area C). This business is at the west corner of Tenth and Harrison Streets, across from project site. The property is an old service station now used exclusively for auto repair. The gas pump island (without pumps) is still present. USTs might still be in place. The site is a potential source of petroleum hydrocarbons, solvents, other organic compounds, and heavy metals.
- Speck Cab Company / Veterans Cab Company, 1501 Harrison Street (Area M). Starting at the south corner of Eleventh and Harrison Streets, this business occupies the entire block opposite the project site between Harrison and Division Streets. The property is used for taxicab repair, service, parking and storage, and is known to contain gas pumps, USTs, and an oil-dispensing tank. The facility has Department of Public Health hazardous materials storage permits for greases, oils, solvents, and USTs. A past fuel leak has been reported, as discussed below. The site is a potential source of petroleum hydrocarbons, solvents and other organic compounds, chromium, zinc and other heavy metals.

Several historic businesses neighboring the project site had potential to cause metal or hydrocarbon contamination immediately adjacent to the project site. Those businesses include a junk yard at 1498 Harrison Street (Area A) and a metal working facility at 491 Tenth Street (Area H), both shown on a 1913 Sanborn map, and a metal plating works at 1420 Harrison Street (Area B) and an iron works at 447 Tenth Street (Area E), both in operation in 1949. At that same time, a printing shop was situated at 465 Tenth Street (Area G). Printing shops of that period used oil-based inks, solvents, and metallic lead.

Documentation in the form of permits, maps, surveys, and other records were found for ten historic UST installations within approximately 400 feet of the project site:/3/

- Speck Cab Company / Veterans Cab Company, 1501 Harrison Street (Area M). This active business was discussed above. The property has three permitted USTs, 7,000, 8,000 and 10,000 gallons, respectively. The USTs tested sound in recent leak checks. The Department of Public Health has documentation of leaking 500-gallon tank that was removed in February 1989. Soil tests indicated concentrations of chromium and zinc of 23 parts per million (ppm) and oil and grease of 15 ppm beneath the tank.

TABLE E-1: POTENTIAL SOURCES OF CONTAMINATION IN THE VICINITY

<u>Map Key/a/</u>	<u>Source and Distance from Site</u>	<u>Type of Use</u>	<u>Potential Contaminants</u>
A	Junk Yard, 1498 Harrison St. 90 feet	Misc. storage and disposal	Petroleum hydrocarbons, solvents, heavy metals, acids
B	Metal Plating Works, 1420 Harrison St. 90 feet	Metal handling	Heavy metals, solvents, acids
C	Discount Complete Auto Repair, 398 Tenth St. 90 feet	Auto repair, UST	Petroleum hydrocarbons, solvents, acids
D	Shell Service Station 1394 Harrison St. 110 feet	Auto repair, UST/b/	Petroleum hydrocarbons, solvents, heavy metals, acids
E	Iron Works 447 Tenth St. 90 feet	Foundry	Heavy metals
F	Joseph L. Barnes Construction Co., 449 Tenth St. 90 feet	Three USTs	Petroleum hydrocarbons
G	Print Shop 465 Tenth St. 90 feet	Printing	Petroleum hydrocarbons, solvents, heavy metals,
H	Metal Works, 491 Tenth St. 90 feet	Foundry	Heavy metals
I	Service Station 501 Tenth St. or 1198 Bryant St. 110 feet	UST	Petroleum hydrocarbons
J	Chevron Station 590 Tenth St. 310 feet	Auto repair, at least nine USTs, fuel leak	Petroleum hydrocarbons, solvents, heavy metals, acids

(Continued)



TABLE E-1: POTENTIAL SOURCES OF CONTAMINATION IN THE VICINITY  
(Continued)

Map Key/a/	Source and Distance from Site	Type of Use	Potential Contaminants
K	Associated Limousines 1398 Bryant St. 330 feet	10,000-gal UST	Petroleum hydrocarbons
L	ABC Towing & Storage 498 Eleventh St. 90 feet	Auto storage, 550-gal UST	Petroleum hydrocarbons, solvents, heavy metals,
M	Speck Cab Company/ Veterans Cab Company, 1501 Harrison St. 90 feet	Vehicle service, at least 3 USTs, UST leak	Petroleum hydrocarbons, solvents, heavy metals
N	Patrick J. Ruane Inc. 1617 Harrison St. 450 feet	550-gal UST, fuel leak	Petroleum hydrocarbons
P	C and G Muffler 340 Tenth St. 400 feet	1,500-gal UST	Petroleum hydrocarbons

/a/ Approximate locations of potential sources of contamination are shown on Figure 9 on p. 42.

/b/ Underground storage tank.

SOURCE: Lee and Praszker, *Environmental Site Assessment*, 1990; Environmental Science Associates.

- ABC Towing and Storage, 498 Eleventh Street (Area L). The lot is now part of Speck Cab Co. property. A permit for 550-gallon gasoline UST dating from 1965 is on file with SFFD. (No other documentation.)
- Texaco Service Station, 398 Tenth Street (Area C). The property is currently Discount Complete Auto Repair, discussed above. It appears on Sanborn Maps dated 1949, 1965, and 1988. The USTs were apparently abandoned in place. (No other documentation.)
- Shell Service Station, 1394 Harrison Street (Area D). The station is located at the north corner of Tenth and Harrison Streets. It dates from at least 1949 through 1957 but was gone by 1965, as shown on Sanborn Maps. (No other documentation.)

- Joseph L. Barnes Construction Company, 449 Tenth Street (Area F). An SFFD building report dated 1979 indicated the presence of two 1,000-gallon gasoline USTs and one 6,000-gallon gasoline UST. (No other documentation.)
- Service Station, 501 Tenth Street or 1198 Bryant Street (Area I). The facility appears on 1949 the Sanborn map. The site is currently occupied by a freeway ramp. (No other documentation.)
- Chevron Station #95260, 590 Tenth Street (Area J). This former service station had a known fuel leak. It is cited on California's list of contaminated sites (the "Cortese" list). At least nine former gasoline USTs with permits dating from the 1930s and 1940s are documented. A site investigated reported 2,900 ppm of gasoline in groundwater. Monitoring wells have been installed on site; a groundwater remediation program is in the planning stage.
- Patrick J. Ruane Inc., 1617 Harrison Street (Area N). A permit for a 550-gallon liquid petroleum gas UST dates from 1965. The property is noted on California's contaminated sites list as unspecified tank leak. A tank cleaning was undertaken in 1987. (No other documentation.)
- C and G Muffler, 340 Tenth Street (Area P). A permit for 1,500-gallon fuel oil UST dates from 1967. The tank apparently was located along Juniper Street. (No other documentation.)
- Commercial Truck Garage or Associated Limousines, 1398 Bryant Street (Area K). A permit dated 1976 for 10,000-gallon gasoline UST located in the parking area behind building is on file with SFFD. (No other documentation.)

## **SITE REMEDIATION**

Soil remediation methods could include excavation and site treatment, excavation and off-site treatment or disposal, or treatment without excavation. Some methods of in-situ treatment of soils contaminated with petroleum hydrocarbons, solvents and/or heavy metals include:

- *Bioremediation.* Enhancement or introduction of microbial organisms in in-situ soils to promote degradation of organic contaminants.
- *Chemical fixation.* Introduction of chemicals that will bind with and stabilize contaminants in soil.
- *Soil washing.* Introducing water solution into soil in-situ to dissolve contaminants, and then removing and treating or disposing of wash water.

Excavated soils can be treated either on- or off-site as described above. Excavated soils can also be air stripped by introducing forced air to remove volatile contaminants



that are then trapped and collected in a filter medium. Excavated soils that are hauled off-site may be similarly treated at permitted hazardous waste facilities.

Remediation alternatives for clean-up of contaminated groundwater could include in-situ treatment, extraction and on-site treatment, or extraction and off-site treatment and/or disposal. Groundwater is extracted by pumping it out of wells installed on-site. Some of the technologies for treatment of organic contaminants include use of carbon adsorption, filtration systems and oil-water gravity separation. Metal precipitation and subsequent removal of a solid is a common treatment for groundwater contaminated by heavy metals. Extracted groundwater may also be hauled off-site for treatment at a hazardous waste facility. Discharge of treated groundwater to the publicly owned treatment works would require regulatory agency permits.

#### NOTES - Hazardous Materials

- /1/ The Regional Water Quality Control Board (RWQCB) water quality protection objectives and goals for the San Francisco Bay Region are contained in the *Water Quality Control Plan, San Francisco Bay Basin, Region (2)*, December 1986.
- /2/ *Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities*, National Institute for Occupational Safety and Health (NIOSH) and Occupational Safety and Health Administration (OSHA), NIOSH Publication No. 85-115, October, 1985.
- /3/ Lee and Praszker Consulting Geotechnical Engineers and Geologists, *Environmental Site Assessment: Costco Warehouse Project, Tenth and Harrison Streets, San Francisco, California*, Lee and Praszker, Inc., 147 Natoma Street, San Francisco, California, June, 1990.
- /4/ The rate of migration of a substance depends on its chemical and physical properties and the properties of the media through which it flows; e.g., gasoline can migrate readily through the soil, while lead attaches to soil particles and is virtually immobile.
- /5/ A complete site history conducted for each individual property within the project vicinity could reveal additional potential sources.

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